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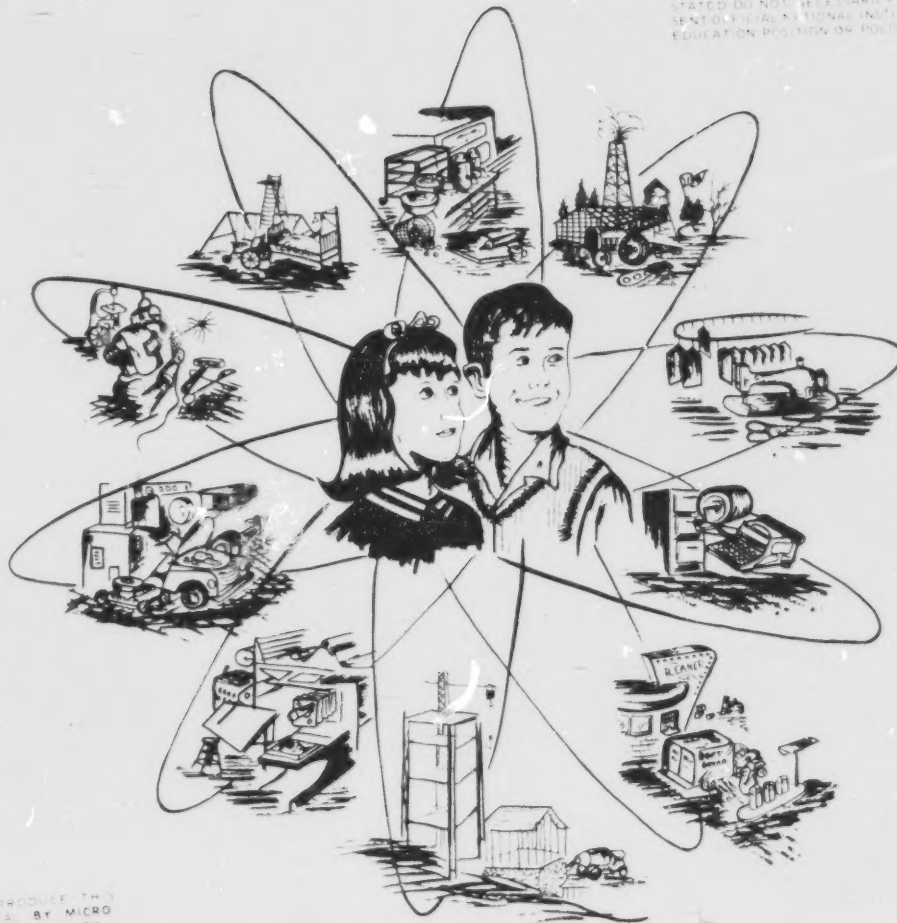
ABSTRACT

This teacher's guide is one of a series of publications focusing on the occupational preparation of persons with special education needs. The material was developed and tested by cooperating teachers over a period of three years. Task analysis information is presented using occupational descriptions from the Dictionary of Occupational Titles, covering entry level occupations generally available in Michigan. Instructional task modules are presented in detail under the headings: behavioral task knowledges/task skills, instructional methods, task-related competencies, instructional materials, basic information for cooperative teaching (language of the task and quantitative concepts), and suggestions. An instructional materials bibliography is included, followed by two appendixes, an instructional materials code indicating probable learning sensations, and a task-related competencies code. This guide describes 24 tasks common to the construction cluster, 25 tasks for four selected entry occupations for the building maintenance/service subcluster, and 51 tasks for seven selected entry occupations in the residential construction subcluster. (SA)

Cluster Guide

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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An Instructional Resource Guide to Enhance Cooperative
Vocational Education / Special Education Teaching

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CONSTRUCTION CLUSTER GUIDE

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Mt. Pleasant, Michigan 48859

PREFACE

This teacher's guide is one of a series of publications focusing upon the occupational preparation of persons with special education needs. It is intended to be used jointly by concerned teachers as they work collectively to serve students with unique educational problems. Developed and tested by cooperating teachers, these materials represent the culmination of three years of intensive listening, communication, cooperation, and positive action between vocational and special education teachers. If the exciting ideas in these pages are actively and cooperatively implemented, the impact upon our young people could well be tremendous.

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The occupational task analysis data/information for the Construction Cluster was obtained from the Ingham Intermediate School District. In early 1973, this Intermediate School District completed a comprehensive task analysis project covering 50 different occupations in a three-county area. The key analysis occupations selected for this cluster were identical to those construction occupations identified and analyzed by the project.

Acknowledgement is due the Ingham Intermediate School District and the Michigan Department of Education for arranging for the release of this data.

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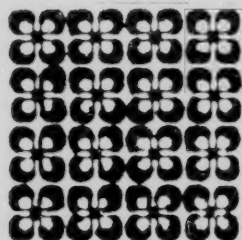
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TASK ANALYSIS INFORMATION

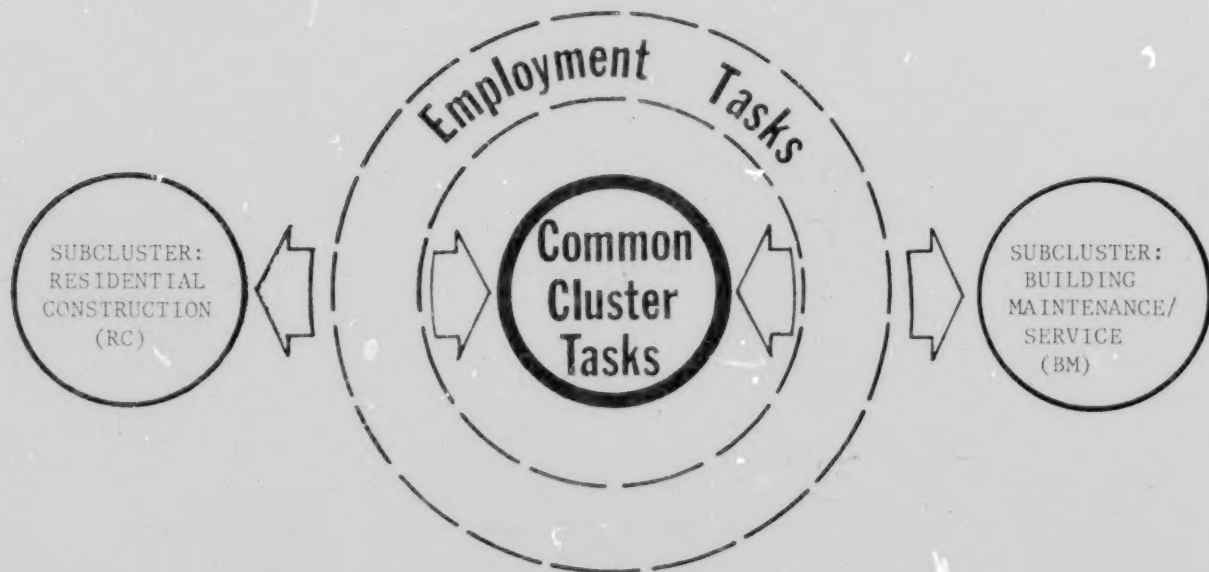
CONSTRUCTION CLUSTER

- CLUSTER ORGANIZATION
- CLUSTERED OCCUPATIONS
- DICTIONARY OF OCCUPATIONAL TITLES
- CLUSTER COMMONALITY ANALYSIS
- SUBCLUSTER COMMONALITY ANALYSIS:
BUILDING MAINTENANCE/SERVICE
- SUBCLUSTER COMMONALITY ANALYSIS:
RESIDENTIAL CONSTRUCTION

CLUSTER

ORGANIZATION

CONSTRUCTION CLUSTER (CON)



CLUSTERED OCCUPATIONS

CLUSTER: CONSTRUCTION

OE PRO- GRAM CODE	SUBCLUSTER TITLE	D.O.T.	OCCUPATIONAL TITLES
17.1001 17.1099 17.1010 17.1004	Residential Construction	*860.381 860.781 860.887 863.884 *884.887 886.887 861.887	Carpenter Carpenter, Rough Carpenter Helper Insulation Worker Cement Mason Helper Roofing Helper Bricklayer Helper
17.10 17.11	Building Maintenance and Service	*899.381 381.887 381.887 *382.884 389.887	Maintenance Man, Building Charwomen Porter Janitor Sexton
			*Key Analysis Occupation

DICTIONARY OF OCCUPATIONAL TITLES

The following is a list of occupational descriptions taken from the third edition (1968) of the Dictionary of Occupational Titles. These represent the key analysis occupations for the Construction Cluster.

Each occupational title represents an entry-level occupation which is generally available (in demand) across the state of Michigan at the present time. However, teachers and curriculum planners must carefully study the generalizability of this information/data to their specific community. Local or regional manpower information and data must be carefully reviewed and analyzed in making decisions related to local vocational program offerings and specific curriculum or course content.

- 860.381 CARPENTER Constructs, erects, installs, and repairs structures and fixtures of wood, plywood, and wallboard, using carpenter's handtools and power tools, and conforming to local building codes: Studies blueprints, sketches, or building plans, for information pertaining to type of material required, such as lumber or fiberboard, and dimensions of structure or fixture to be fabricated. Selects specified type of lumber or other materials. Prepares layout, using rule, framing square, and calipers. Marks cutting and assembly lines on materials, using pencil, chalk, and marking gage. Shapes materials to prescribed measurements, using saws, chisels, and planes. Assembles cut and shaped materials and fastens them together with nails, dowel pins, or glue. Verifies trueness of structure with plumb bob and carpenter's level. Erects framework for structures and lays subflooring. Builds stairs and lays out and installs partitions and cabinet work. Covers subfloor with building paper to keep out moisture and lays hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base. Applies shock-absorbing, sound-deadening, and decorative paneling to ceilings and walls. Fits and installs prefabricated window frames, doors, doorframes, weather stripping, interior and exterior trim, and finish hardware, such as locks, letter drops, and kick plates. Constructs concrete forms and pouring chutes. Erects scaffolding and ladders for assembling structures above ground level.
- 899.381 MAINTENANCE MAN, BUILDING Repairs and maintains physical structures of commercial and industrial establishments, such as factories, office buildings, apartment houses, and logging and mining constructions, using handtools and power tools: Replaces defective electrical switches and other fixtures. Paints structures, and repairs woodwork with carpenter's tools. Repairs plumbing fixtures. Repairs plaster and lays brick. Builds sheds and other outbuildings.

382.884 JANITOR Keeps hotel, office building, apartment house, or similar building in clean and orderly condition and tends furnace and boiler to provide heat and hot water for tenants, performing any combination of following duties: Sweeps and mops or scrubs hallways and stairs. Regulates flow of fuel into automatic furnace or shovels coal into hand-fired furnace. Empties tenants' trash and garbage containers. Keeps building in good repair, performing routine painting, plumbing, electrical wiring, and other related maintenance activities, using handtools. Cautions tenants regarding complaints about excessive noise, disorderly conduct, or misuse of property. Notifies management concerning need for major repairs or additions to lighting, heating, and ventilating equipment. Cleans snow and debris from sidewalk. Mows lawn, trims shrubbery, and cultivates flowers, using handtools and power tools.

844.887 CEMENT-MASON HELPER Assists Cement Mason to smooth and finish exposed surfaces of concrete by performing finishing tasks, such as floating freshly laid concrete and edging concrete slabs: Levels freshly poured concrete, using screed. Kicks screeded surface with hand or long-handled float, and pushes and pulls edger along edges of concrete to prepare edges for final finishing. Pushes and pulls stiff brush over finished surfaces of concrete pavement to produce roughened surface. May push and pull canvas belt back and forth across surface of concrete pavement to smooth surface and remove trowel and float marks. May chip, grind, or rub concrete surfaces to remove bulges and rough spots, and patch defects with cement mortar.

CLUSTER COMMONALITY ANALYSIS

CONSTRUCTION CLUSTER COMMON CLUSTER TASKS

SUBCLUSTERS (CON)

x - essential
o - desirable

INSTRUCTIONAL TASK MODULES

	RESIDENTIAL CONSTRUCTION	BUILDING MAINTENANCE/ SERVICE
CT01 Use measurement and layout tools	x	x
CT02 Use saws	x	x
CT03 Use planing, smoothing, and shaping hand tools	x	x
CT04 Use drilling and boring tools	x	x
CT05 Use fastening and disassembly tools	x	x
CT06 Maintain hand and power tools	x	x
CT07 Operate power hand tools	x	x
CT08 Utilize linear, square, and cubic measures of materials	x	x
CT09 Select and use fasteners	x	x
CT10 Use adhesives for fabrication	x	x
CT11 Interpret information from floor plans	x	x
CT12 Interpret information from elevation drawings	x	o
CT13 Interpret information from detail drawings	x	x
CT14 Interpret information from section drawings	x	x
CT15 Interpret information from building specifications	x	o
CT16 Install cabinet hardware	x	x
CT17 Operate power machine tools	x	x
CT18 Recognize common lumber sizes and defects	x	o
CT19 Identify characteristics/applications of plywood materials	x	o
CT20 Assist in pouring sidewalks and drives	x	o
CT21 Assist in installing drain tile and waterproofing	x	o
CT22 Finish unfinished cabinet facings	x	x
CT23 Finish counter tops	x	o
CT24 Install factory-built cabinets	x	o

SUBCLUSTER COMMONALITY ANALYSIS

BUILDING MAINTENANCE/SERVICE

SELECTED ENTRY OCCUPATIONS

INSTRUCTIONAL TASK MODULES

BM01	Brush sweep floor areas
BM02	Clean stairwells
BM03	Mop sweep floors
BM04	Wet mop floors
BM05	Operate an automatic floor machine
BM06	Strip a floor
BM07	Seal a floor
BM08	Apply floor finish
BM09	Wash painted surfaces
BM10	Clean wall paper
BM11	Wash wainscoted ceramic surfaces
BM12	Wash walls and ceilings by hand
BM13	Wash walls and ceilings by machine
BM14	Wash and clean venetian blinds
BM15	Clean and disinfect restroom equipment
BM16	Disinfect restroom floors
BM17	Clean and polish mirrors, windows, and glass
BM18	Wash and polish metal, wooden and upholstered furniture
BM19	Clean light fixtures
BM20	Clean rugs and carpets

x - essential
o - desirable

MAINTENANCE MAN, BUILDING	CHARWOMEN	PORTER	JANITOR
x	x	x	x
x	x	x	x
x	x	x	x
x	x	x	x
x	x	x	x
x	o	x	x
x	o	x	x
x	o	x	x
x	x	x	x
x	x	x	
x	x	x	o
x	x	x	o
o	x	x	
x	x	x	o
x	x	x	o
o	x	x	
o	x	x	
x	o	x	o
x	x	x	x

SUBCLUSTER COMMONALITY ANALYSIS

BUILDING MAINTENANCE/SERVICE

SELECTED ENTRY OCCUPATIONS

INSTRUCTIONAL TASK MODULES

- BM21 Wash windows
- BM22 Clean metal surfaces
- BM23 Perform dusting
- BM24 Store maintenance supplies and equipment
- BM25 Schedule maintenance activities

MAINTENANCE MAN, BUILDING	CHARWOMEN	PORTER	JANITOR
x	x	x	x
x	x	x	x
x	x	x	x
x	x	x	x
x			x

x - essential
o - desirable

SUBCLUSTER COMMONALITY ANALYSIS

RESIDENTIAL CONSTRUCTION

SELECTED ENTRY OCCUPATIONS

INSTRUCTIONAL TASK MODULES

RC01	Handle and store building materials
RC02	Assist in laying out building lines
RC03	Assist in constructing forms for footings
RC04	Mix concrete and mortar
RC05	Lay blocks
RC06	Set posts and columns
RC07	Assist in setting girders and beams
RC08	Assist in constructing framing over girders and beams
RC09	Assist in installing sills
RC10	Assist in installing floor joists
RC11	Frame floor openings
RC12	Install bridging
RC13	Attach subflooring
RC14	Assist in framing outside wall corner posts
RC15	Assist in framing partition intersections
RC16	Follow a master stud layout
RC17	Frame rough openings
RC18	Assemble a wall section
RC19	Erect a wall section
RC20	Install partition sections

CARPENTER	CARPENTER, ROUGH	CARPENTER HELPER	INSULATION WORKER	CEMENT MASON HELPER	ROOFER HELPER	BRICKLAYER HELPER
x	x	x	x	x	x	x
x	x	o		o	x	o
x	x	o		o		o
o	o	o		x		x
o	o			o		o
x	x	o		o		o
x	x	o		o		o
x	x	o				
x	x	o				
x	x	o				
x	x	x				
x	x	x				
x	x	o				
x	x	o				
x	x	o				
x	x	o				
x	x	o				
x	x	o				

x - essential
o - desirable

SUBCLUSTER COMMONALITY ANALYSIS

RESIDENTIAL CONSTRUCTION

SELECTED ENTRY OCCUPATIONS

INSTRUCTIONAL TASK MODULES

	CARPENTER	CARPENTER, ROUGH	CARPENTER HELPER	INSULATION WORKER	CEMENT MASON HELPER	ROOFER HELPER	BRICKLAYER HELPER
RC21 Install bracing to exterior walls	x	x	o				
RC22 Add double top plate	x	x	o				
RC23 Apply wall sheathing	x	x	x				
RC24 Assist in assembling a ceiling frame	x	x	o				
RC25 Cut and erect roof rafters	x	x	o				
RC26 Frame-in roof openings	x	x	o				
RC27 Assist in anchoring a roof frame	x	x	x				
RC28 Assemble and install roof trusses	x	x	o				
RC29 Attach roof sheathing	x	x	x				
RC30 Install asphalt roofing materials	x	x	x				
RC31 Assist in installing vapor barrier	x	x	x	x			
RC32 Install batt and blanket insulation	x	x	o	x			
RC33 Install reflective insulation	x	x	o	x			
RC34 Install fill insulation	x	x	o	x			
RC35 Assist in installing rigid insulation	x	x	o	x			
RC36 Assist in applying or installing acoustical insulation materials	x	x	o	x			
RC37 Recognize types and parts of windows	x	x	o				
RC38 Assist in setting windows	x	x	o				
RC39 Assist in installing door frames	x	x	o				
RC40 Install a garage door	x	o	o				

x - essential
o - desirable

SUBCLUSTER COMMONALITY ANALYSIS

RESIDENTIAL CONSTRUCTION

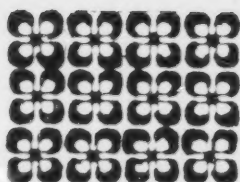
SELECTED ENTRY OCCUPATIONS

INSTRUCTIONAL TASK MODULES

RC41	Assist in constructing rake and cornice sections
RC42	Install horizontal siding
RC43	Install vertical siding
RC44	Assist in installing siding systems
RC45	Install gutter systems
RC46	Prepare a brick veneer finish
RC47	Recognize interior finishing operations
RC43	Assist in applying ceiling tile
RC49	Hang interior doors
RC50	Apply interior trim
RC51	Lay interior floors

CARPENTER	CARPENTER, ROUGH	CARPENTER HELPER	INSULATION WORKER	CEMENT MASON HELPER	ROOFER HELPER	BRICKLAYER HELPER
x	o	o				
x	o	o				
x	o	o				
x	o	o				
x		o			o	
						x
x		o				
x		o				
x		o				
x		o				

x - essential
o - desirable



INSTRUCTIONAL TASK MODULES

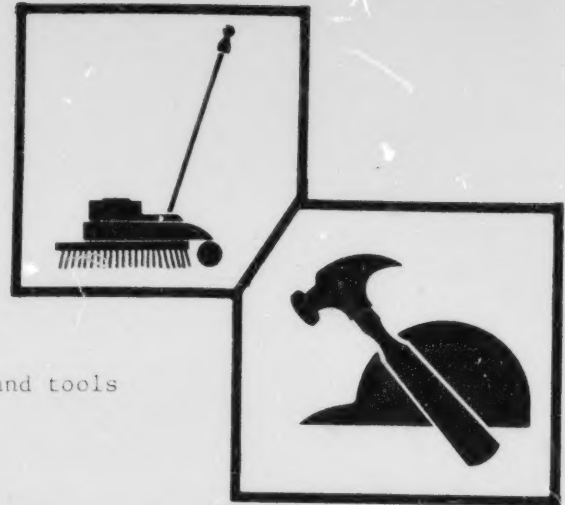
CONSTRUCTION CLUSTER

- COMMON CLUSTER TASKS
- SUBCLUSTER: BUILDING MAINTENANCE/SERVICE
- SUBCLUSTER: RESIDENTIAL CONSTRUCTION

COMMON CLUSTER TASKS

INSTRUCTIONAL TASK MODULES

- CT01 Use measurement and layout tools
- CT02 Use saws
- CT03 Use planing, smoothing, and shaping hand tools
- CT04 Use drilling and boring tools
- CT05 Use fastening and disassembly tools
- CT06 Maintain hand and power tools
- CT07 Operate power hand tools
- CT08 Utilize linear, square, and cubic measures of materials
- CT09 Select and use fasteners
- CT10 Use adhesives for fabrication
- CT11 Interpret information from floor plans
- CT12 Interpret information from elevation drawings
- CT13 Interpret information from detail drawings
- CT14 Interpret information from section drawings
- CT15 Interpret information from building specifications
- CT16 Install cabinet hardware
- CT17 Operate power machine tools
- CT18 Recognize common lumber sizes and defects
- CT19 Identify characteristics/applications of plywood materials
- CT20 Assist in pouring sidewalks and drives
- CT21 Assist in installing drain tile and waterproofing
- CT22 Finish unfinished cabinet facings
- CT23 Finish counter tops
- CT24 Install factory-built cabinets



COMMON CLUSTER TASKS

Code: CON - CT01 TASK: Use measurement and layout tools

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Level Tape or rule Framing square T bevel Scratch awl Steel long tape Chalk line Line bevel Combination square Marking gauge Plumb bob Dividers Butt gauge Feet	Measure boards for thickness, width and length. Lengths is in feet, width is in feet or inches, thickness is in inches. The concept of rounding may be applied by rounding the actual measurement up to: even numbers of feet in length, i.e. 6', 8', 10'; even numbers of inches in width i.e. 4", 6", 8"; full numbers of inches in thickness i.e. 1", 2", 3". Prepare a shopping list for tools. Find these items in a catalogue, identify and price, figure total cost.	- Teacher picks up a tool - student identify. - Student picks up tools one at a time and identify. - Student identify which tool another student is using in pantomime. - by description of tool. - by name. - Student match name and tool by - printed label - verbal identification - Teacher and deaf student should cooperatively develop some simple signs related to language of the task. - Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). - Be careful in using words with multiple meanings when talking to lip reading deaf students (plumb, scale).
Supportive Instructional Materials: Assortment of measuring tools supplied by the vocational teacher.		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Use saws

Code: CON - CT02

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
		Instructional Materials			
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name, the different types of saws used in construction. 2. recognize and observe specific safety precautions for using saws. 3. select and demonstrate the appropriate saw for a given application or operation. 4. identify and describe the proper storage condition for specific saws.	Task-Related Competencies KNOWLEDGE A 3 NUMBERS B 4a APPLICATION C 2, 5 PHYSICAL D 1a, d, f 2b, 3c, g	Title Modern Carpentry, p. 10 "Saw Operations" "Hand Saw Nomenclature"	Media 13 8 12	Bib. 22 57 13
Involved					
Productive					
Employable					
		Note: This task will be performed as a part of several succeeding tasks.			

COMMON CLUSTER TASKS

Code: CON - CT02 TASK: Use saws -

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Cross cut saw Rip saw Keyhole saw Hack saw Radial arm saw Set	Determine the number of saw points (teeth) per inch, by measuring one inch along the cutting edge of a saw, and counting the number of points within the inch. (8-point saw, 10-point saw).	- Teacher and deaf student should cooperative develop some simple signs related to language of the task. - Drill deaf student extensively on language of the task. - Discuss the importance of saw safety and care, i.e. a wood-cutting saw should not be allowed to touch metal, concrete, or other hard surfaces.	
Supportive Instructional Materials: Collect examples of each of the four hand saws from the vocational department. Field trip to the construction lab or construction site.			

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Use smoothing, planing, and shaping hand tools

Code: CON - CT03

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Instructional Methods		
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - Identify by name specific types of planing, smoothing, and shaping hand tools: - jack plant - block plane - utility knife - scraper - surform plane - router plane - wood chisels - putty knife - flooring chisel - cabinet maker's plant. - recognize and observe specific safety precautions for using planing, smoothing, and shaping tools. - select and demonstrate the appropriate tool for a given application or operation. - identify, describe, and simulate the proper storage conditions for specific smoothing, planing, and shaping tools.	- Students view film loops on use and sharpening of tools. - Students review illustrated text for nomenclature. - Teacher provides demonstration on use and maintenance of each tool for each individual student as he begins to use selected tools. - Para-professionals provide sustained involvement with students having difficulty with this task. Note: This task will be performed as a part of several succeeding tasks.		
Involved		Task-Related Competencies KNOWLEDGE A 3 NUMBERS APPLICATION C 2,5,8 PHYSICAL		
Productive		Instructional Materials Title Modern Carpentry, pp. 12-13 "Planes and Their Uses" "Sharpening the Plane" "Woodworking-Part I" 8 loops		
Employable		Media Bib. 13 22 9 33 9 57 9 51		

COMMON CLUSTER TASKS

Code: CON - CTOJ TASK: Use smoothing, planing, and shaping hand tools

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Smooth plane	Level	The following are common tool sizes which the student should know: planes 6" - 14" (length of bed) files (length of blade) rasp/surformer 6" - 12" (length of blade)	• Stress safety and care in handling tools (i.e. storage of tools). • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Be careful in using words with multiple meanings when talking to lip reading deaf students (plane, jack, rat tail).
Jack plane	Flush		
Block plane	File handle		
Surformer	Tool box or kit		
Rasp	Oil stone		
File shapes	Grinding wheel		
half-round square			
rat-tail triangle	Wire brush		
Utility knife			
Scraper			
Router			
Chisel			
wood			
cold			
bride			
brick			
Smooth			
Supportive Instructional Materials:			
Catalogue from Sears, etc., for tool identification			
Industrial catalogue to learn industrial name brands			

Supportive Instructional Materials:

Catalogue from Sears, etc., for tool identification
Industrial catalogue to learn industrial name brands

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Use drilling and boring tools

Code: CON - CT04

Student Name:

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods			
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name specific drilling and boring tools: a. hand drill b. push drill c. brace d. countersink e. expansive bit f. auger bits (1/4 to 1") g. twist drill bits. 2. recognize and observe specific safety precautions related to using drilling and boring hand tools. 3. select and demonstrate the appropriate tool for a given application or operation. 4. identify, describe, and simulate the proper storage conditions for given drilling and boring hand tools.	• Students prepare a display of tools with tool parts labeled.			
Involved		• Students view film loops.			
Productive		• Teacher encourages small peer group cooperation and interaction.			
Employable		• Teacher provides a demonstration of specific tools for individual jobs with each student.			
Note: This task will be performed as a part of several succeeding tasks.					
		Instructional Materials			
Task-Related Competencies		Title		Media	Bib.
KNOWLEDGE		Modern Carpentry, pp. 14-15 "Portable Drills" "Power Drills for Woodworking" "How to Use Hand Boring Tools"		13 12 9 9	22 13 47 57
A 3,4					
NUMBERS					
B 1, 4a					
APPLICATION					
C 2,5,8					
PHYSICAL					
D 1a,d 2b 3c,e,f,g					

COMMON CLUSTER TASKS

Code: CON - CT04 TASK: Use drilling and boring tools

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Auger bits Standard bits Tang or Shank Twist Drills Brace Countersink	Measure the diameter of drilled hole. Recognize size of standard bits. Using drilling tools, measure the diameter in fractional parts of an inch to a 1/16th of an inch accuracy.	• Drill several holes with different size bits. Measure the diameters of the holes and explain the relationship between the 24 stamped on the shank and the 1 1/2" diameter of the hole drilled by the bit. (Size stamped on shank is a whole number which indicates the size of the diameter in 16ths of an inch) • Use pieces of cardboard 1/16" long to construct the size of the diameter. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual).
Supportive Instructional Materials: Several sizes of auger bits Board with holes drilled by specified bits Ruler with divisions of an inch down to 16ths Pieces of paper 1/16" in width		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Use fastening and disassembly tools

Code: CON - C105

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods						
Introduced	Involved	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - Identify by name specific fastening and disassembly tools: - ripping bar - rip chisel - curved claw hammer - rip claw hammer - half hatchet - soft face hammer - adjustable wrench - screw drivers - nail sets - screw driver bits - pliers - ratchet screwdriver - Phillip' screwdriver. - recognize and observe specific safety precautions in using fastening and disassembly tools. - select and demonstrate the appropriate tool for a given application. - Identify, describe, and demonstrate the proper storage condition for given fastening and disassembly tools.	KNOWLEDGE A 3,4 NUMBERS APPLICATION C 2,5,8 PHYSICAL D 1a,d,f 2b 3c,e,f,g	Note: This task will be performed as a part of several succeeding tasks.	Instructional Materials				
Productive	Employable				Task-Related Competencies	Title	Media	Bib.	
							Modern Carpentry, pp. 16,17,19	13	22
							Carpentry and Builder's Guide Volume I	13	25

COMMON CLUSTER TASKS

Code: CON - CT05 TASK: Use fastening and disassembly tools

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Claw hammer	Recognize hammer sizes in ounce measurements.	• Compare the weight of an 8 oz. hammer to that of a 18 oz. hammer (lift, pendulum swing, balance). • Measure the length of various size ripping bars. • Explain that nail sets are sized by the diameter measurement of the tip (measurement is in 32nd of an inch). • Measure the size of several different screw drivers (length from ferrule to the tip). • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.
Ripping bars	Recognize screwdriver sizes in inch measurements.	
Nail set	Recognize nail set sizes in diameters of the tip.	
Screw driver		
Supportive Instructional Materials: Several claw hammers of different size. Several ripping bars of varying length. Nail sets of varying size. Several screw drivers of different size.		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Maintain hand and power tools

Code: CON - CT06

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Instructional Materials		
Introduced	Involved	Task-Related Competencies	Title	Media Bib.
	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - provide for hand and power tool maintenance by performing the following: - wipe tools clean following use - keep tool handles tight - keep tool edges sharp by honing, grinding, and filing - set saws.	KNOWLEDGE A 3,9	Modern Carpentry, pp. 20-22	13 22
		NUMBERS	Modern Power Tool and Woodworking <u>Book</u>	13 5
		APPLICATION C 5,8	"Getting the Most From Your Home Power Tools" (booklet)	13 25
		PHYSICAL D 1a,b,d,f 2a/b 3c,f	"Care and Use of Hand Tools" Part I, II, III, IV	8

- Teacher presents class demonstration on care and maintenance of individual hand and power tools.
- Students review maintenance techniques and procedures illustrated in texts.
- Students prepare a bulletin board display illustrating the importance of maintaining tools.
- Para-professionals provide sustained involvement with students having difficulty with this task.

COMMON CLUSTER TASKS

Code: CON - CT06 TASK: Maintain hand and power tools

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Portable Stable Sharpen 3-prong plug Ground 3 phase wiring Honing Grinding Set the saw Edges Filing Handles Tight Teeth #/"	Kerf Tool insignia Brace Auger bits Forged steel Discuss tool prices in relation to quality (i.e. foreign made vs. American made). Recognize auger bit sizes #4-16. The numbers 4-16 represent the diameter of the bit in 16ths of an inch. i.e. a no. 8 drill is 8/16" of 1/2" in diameter.	• Safety • Importance of tool exchanges and returning to storage. • Tool casts • Drill deaf student extensively on language of the task. • Suggest to parents that tasks be reinforced and experienced in the home environment.

Supportive Instructional Materials:

Wall charts by Stanley, Sears, Craftsman, Lufkin, Starratt
 General Motors film on "ABC's of Handtools"

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Operate power hand tools

Code: CON - C107

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
		Task-Related Competencies	Instructional Materials	Media	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name specific hand power tools: a. portable circular saw (skill) b. saber saw c. portable electric drill d. power plane e. router f. portable sanders. 2. recognize and observe specific safety precautions in operating power hand tools. 3. select and demonstrate the appropriate power tool for a given application. 4. identify, describe, and demonstrate the proper storage condition for specific power hand tools.	KNOWLEDGE	Modern Carpentry, Chapter 2 pp. 25 "Power Tools" (series) "Power Tools" (series) "ABC's of Handtools"	13	22
Involved		A 3,4,7,9		12	10
Productive		NUMBERS		9	7
Employable		B 4a		13	21
		APPLICATION			
		C 5,8			
		PHYSICAL			
		D 1a,b,d			
		2b			
		3c,g			
		Note: This task will be performed as a part of several succeeding tasks.			

COMMON CLUSTER TASKS

Code: CON - CT07 TASK: Operate power hand tools

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Portable drill press Portable circular saw (skill saw) Portable saber saw Portable jig saw Portable electric drill Power plane Hand disc sander Hand vibrating sander Hand belt sander Portable router Pneumatic chisel Ground (wire)	Recognize common power tool sizes: skill saws 4" - 7 1/4" or 8" (diameter on the blade) radial arm 8"-12" (diameter on the blade) panel saw 8" (blade diameter) Interpret the amp rating of a portable power tool and convert it to a horsepower rating.	• Make sure instructor okays the use of tool independently. • Discuss brand names such as Black and Decker, Craftsman, Skil, Rockwell, Powercraft, Lufkin, Stanley, Commercial Heavy Duty. • Stress safety in operation of power hand tools such as saw guards, etc. • Observe safety rules. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Suggest to parents that tasks be reinforced and experienced in the home environment.
Supportive Instructional Materials: Catalogue of brand name tools Stanley films, 16mm, film loops, charts Instructor's favorite text		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Utilize linear, square, and cubic measures of materials

Code: CON - C108

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify common linear measurements to include feet, inches, and fractions. 2. identify common square measurements to include square yards (carpet), square feet (plywood) and squares (roofing). 3. identify common cubic measurements to include cubic yards (concrete) and board feet. 4. compute the needed linear, square, and cubic sizes of materials for a given practical application or problem accurately.	KNOWLEDGE A 3,7	Modern Carpentry, p. 61	13 22
Involved		NUMBERS B 1,2,4a,5,6	Estimating for Building Trades	13 4
Productive		APPLICATION		
Employable		C 3,5 PHYSICAL		

- Special education or supportive teacher should introduce and reinforce basic math concepts.
- Students measure and determine sizes of construction materials found in the lab.
- Teacher discusses the importance of using linear, square, and cubic measures by using floor plans and referring to the bill of materials designating sizes of construction materials.
- Teacher matches successful students who are interested in helping those having difficulty.

COMMON CLUSTER TASKS

Code: CON - CT08 TASK: Utilize linear, square, and cubic measures of materials

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Cubic	Measure lengths of materials in the room in inches (pencil) in feet and inches (length of room).	• Ask Construction and Trades instructors for random sizes and shapes of commonly used building materials i.e. plywood - 1/4, 1/2, 3/4; dimension lumber - 1x4, 1x6, 1x8, 2x4, etc. • Purpose of these scraps is to discuss measurements accuracy and tolerance, as well as measuring. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). • Develop simple problems for students to solve.
Square	Measure lengths and widths in inches (sheets of paper) in feet and inches (table top).	
Formula	Discuss linear measurement as it relates to the number of feet of string on a ball of kite string.	
Multiply	Figure square measurements of a table top, floor surface area, or a pane of glass.	
Divide	Compute the volume of air in the room in cubic feet. Note: round off length, width, and thickness measurements to full feet before computing cubic volume to avoid the mathematical frustrations which often contaminate the concept being taught.	

Supportive Instructional Materials:

Scraps of building construction materials supplied by the building trades instructor(s).

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Select and use fasteners

Code: CON - CT09

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods					
		Instructional Materials					
Introduced	Involved	Productive	Employable	Task-Related Competencies	Title	Media	Bib.
				• Students collect and display all sizes/types of fasteners as an examination. • Students view film loops. • Students should practice the application of all types of fasteners, using scrap materials. • Teacher and students (in small groups) review and discuss illustrated texts and wall charts on fasteners. • Teacher encourages small peer group cooperation and interaction. Note: This task is performed as a part of several succeeding tasks.	Modern Carpentry, p. 67 "Correct Nailing" (wall chart) "Hammers and Nails" "Correct Use of Nails" "Common and Finish Nails"	13 16 9 9 9	22 30 47 47 33

COMMON CLUSTER TASKS

Code: CON - CT09 TASK: Select and use fasteners

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
"Penny" Abbreviation of "d" penny = d (symbol) Nails common box casing finish brads screw nails Wood screws (head shape) round flat oval	Recognize differences in fasteners: nails: common, finish, ring, double head screws: flat head, round head, oval head, pan head bolts: carriage, lag, machine, etc. Measure sizes of nails: length in inches related to d (penny) standards screws: length in inches plus diameter as they relate to standard numbers bolts: length in inches plus diameters in fractions of an inch	• Measure nails and show that the nail size in pennies starts with the inch long nail and increases 1/4" for each penny. * For more advanced students: inch length of nail = $\frac{"d"}{4}$ + 1/2 "d" number of nail = 4 (length in inches - 1/2) • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
Supportive Instructional Materials: Nails of varying lengths Ruler with inch and half-inch divisions		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Use adhesives for fabrication

Code: CON - CT10

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods	Instructional Materials		
			Task-Related Competencies	Title	Media Bib.
Introduced Involved Productive Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify different types of adhesives: a. white glue b. contact cement c. casein glue d. mastics. 2. determine specific glue application procedures and drying times. 3. demonstrate the appropriate surface preparation. 4. demonstrate the correct procedures for applying each type of glue. 5. demonstrate the appropriate techniques/procedures for clamping a glue joint fabrication to meet specifications.	• Teacher provides demonstration of different clamping procedures and techniques to small groups of students. • Students view film loop. • Students review illustrated procedures for gluing and clamping in texts. • Teacher concentrates his effort with students having difficulty.			
		KNOWLEDGE			
		A 1,7,9	Modern Carpentry, p. 68	13	22
		NUMBERS			
		B 4b,d,f	Handbook of Adhesives	13	56
		APPLICATION			
		C 5,8	"Glues and Clamps"	9	47
		PHYSICAL			
		D 1a,b, 2b			

COMMON CLUSTER TASKS

Code: C05 - C110 TASK: Use adhesives for fabrication

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Adhesive Contact cement White glue Elmer's Drying time Headers Beam Girders Clamps adjustable wood screw	Recognize size/capacity of adhesive containers as measured in: - ounces - pints - quarts - gallons Determine the drying time (in minutes and/or hours) by interpreting label information.	• Glue complete surface (i.e. corners). • Brush outside in (rather than inside-out). • Discuss truss gussets (applications plus examples). • Para-professionals provide sustained involvement with students having difficulty with this task. • Teacher matches successful students who are interested in helping those having difficulty.
Supportive Instructional Materials:		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Interpret information from floor plans

Code: CON - CT11

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods				
		Task-Related Competencies	Instructional Materials Title	Media	Bib.	
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. locate and interpret the scale of a given floor plan. 2. sketch the floor plan symbol for each of the following components: a. doors b. windows c. plumbing fixtures d. fireplace e. brick f. stone g. concrete h. concrete block. 3. locate and determine the size of the following floor plan elements: a. windows b. doors c. stairs d. interior partitions e. plumbing fixtures f. footings g. fireplaces	KNOWLEDGE	Modern Carpentry, Unit 5 <u>Building Trades Blueprint Book</u> Parts I & II	13	22	
Involved		A 6,9				
Productive		NUMBERS				13
Employable		B 4a, 5				
		APPLICATION				
		C 6				
		PHYSICAL				
		D 1a, 2a				

COMMON CLUSTER TASKS

Code: CON - CT11 TASK: Interpret information from floor plans

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Scale Section Legend Elevations Recognize symbols of the following components: door window plumbing fixture fireplace brick stone concrete concrete block flashing insulation Roof pitch Grade Fill Basement First floor Living room Dining room Kitchen Front Right side Left side Rear	Idea of scale in actual application, i.e. 1 inch (on a model or drawing = 1 foot (on the real object). Primary architectural scale: 1/4" = 1' 0" i.e. 1/4" on the drawing equals one foot on the building. Other common architectural scales: 1/8" = 1'-0" (plot plan) 1/2" = 1'0" (detail and section drawings) 3/4" = 1'0" (section drawings)	- On flash cards students can associate plan symbols and meaning. - Given a room designation, select appropriate symbols, i.e. bath needs (plumbing, door, window - not fireplace). - Students choose to design a room drawn to scale. - Students participate in designing and coordinating a full house plan. - Students measure their own classroom and then draw it at the chalkboard or on paper at 1/4" = 1' scale, 1/2" = 1' scale, and 3/4" = 1' scale. - Be careful in using words with multiple meanings when talking to lip reading deaf students.
Supportive Instructional Materials:		
Flash cards		
Pins		
Paper		
Overhead transparencies with component name and symbol		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Interpret information from elevation drawings

Code: CON - CT12

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Title	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - locate and interpret the scale of an elevation drawing. - sketch the elevation symbol for each of the following elevation components: - roof pitch triangle - wood - siding - panel - brick - stone - concrete - concrete block - plaster - flashing - tile wall - determine the following information from a given elevation drawing: - floor levels/heights - grade lines - window and door heights - roof slopes - identification of roofing materials - identification of siding (exterior finish) materials - foundation/footing lines	- Students participate in small group discussion to identify specific information on an elevation transparency. - Students review illustrated text materials. - Teacher develops activity/quiz worksheet on reading of elevation drawings. - Para-professionals provide sustained involvement with students having difficulty with this task.	Modern Carpentry, Unit 5 Blueprint Reading	13 13
Involved		KNOWLEDGE A 6,9 NUMBERS B 4a, 5 APPLICATION C 6 PHYSICAL D 1a, 2a		
Productive				
Employable				

COMMON CLUSTER TASKS

Code: CON - CT12 TASK: Interpret information from elevation drawings

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Scale Legend Section Elevations Recognize symbols of the following components: door window plumbing fixture fireplace brick stone concrete concrete block flashing insulation Roof pitch Grade Fill Basement First floor Living room Dining room Kitchen Front Right side Left side Rear Garage	Idea of scale in actual application, i.e. 1 inch (on a model or drawing = 1 foot (on a real object). Primary architectural scale: 1/4" = 1' 0" i.e. 1/4" on the drawing equals one foot on the building. Other common architectural scales: 1/8" = 1'0" (plot plan) 1/2" = 1'0" (detail and section drawings) 3/4" = 1'0" (section drawings)	• On flash cards students can associate plan symbols and meanings. • Given a room designation, select appropriate symbols, i.e. bath needs (plumbing, door, window - not fireplace). • Students choose to design a room drawn to scale. • Students participate in designing and coordinating a full house plan. • Students measure their own classroom and then draw it at the chalkboard or on paper at 1/4" = 1' scale, 1/2" = 1' scale, and 3/4" = 1' scale. • Be careful in using words with multiple meanings when talking to lip reading deaf students.	
Supportive Instructional Materials: Flash cards Pics Paper Overhead transparencies with component name and symbol			

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Interpret information from detail drawings

Code: CON - CT13

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
		Task-Related Competencies	Instructional Materials	Media	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - locate and interpret the scale of a given detail drawing. - sketch the common detail symbols for each of the following: - wood 1) framing 2) finish - brick - stone - concrete - concrete block - earth - glass - insulation - tile - plaster. - locate and determine the following information from a given detail drawing: - dimensions and construction of fireplace - dimensions and construction of kitchen cabinets - door and window frame design - dimensions and construction of stair risers	- Teacher uses simplified, small prints for class review and discussion. - Teacher develops activity/quiz worksheet on identification of detail symbols. - Students review illustrated text materials. - Teacher makes contact with <u>each</u> student during the class period.	Modern Carpentry, Unit 5 Blueprint Reading	13 13	22
Involved					
Productive					
Employable					

COMMON CLUSTER TASKS

Code: CON - CT13 TASK: Interpret information from detail drawings

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Scale Legend Section Elevations Recognize symbols of the following components: door window plumbing fixture fireplace brick stone concrete concrete block flashing insulation Roof pitch Grade Fill Basement First floor Living room Dining room Kitchen Front Right side Left side Rear Garage	Idea of scale in actual application, i.e. 1 inch (on a model or drawing = 1 foot (on a real object)). Primary architectural scale: 1/4" = 1'0" i.e. 1/4" on the drawing equals one foot on the building. Other common architectural scales: 1/8" = 1'0" (plot plan) 1/2" = 1'0" (detail and section drawings) 3/4" = 1'0" (section drawings)	• On flash cards students can associate plan symbols and meanings. • Given a room designation, select appropriate symbols, i.e. bath needs (plumbing, door, window - not fireplace). • Students choose to design a room drawn to scale. • Students participate in designing and coordinating a full house plan. • Students measure their own classroom and then draw it at the chalkboard or on paper at 1/4" = 1' scale, 1/2" = 1' scale, and 3/4" = 1' scale. • Be careful in using words with multiple meanings when talking to lip reading deaf students.	
Supportive Instructional Materials: Flash cards Pins Paper Overhead transparencies with component name and symbol			

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Interpret information from section drawings

Code: CON - CFI4

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Instructional Materials		
Introduced	Involved	Task-Related Competencies	Title	Media
	Employable	KNOWLEDGE A 6,9	Modern Carpentry, Unit 5	13 22
	Productive	NUMBERS B 4a, 5	Blueprint Reading	13
		APPLICATION C 6	"Sectioning" (series 9)	12 32
		PHYSICAL D 1a, 2a		

Given the necessary tools, materials, equipment, and requisite knowledge, the learner will:

- locate and interpret the scale of a given section drawing,
- sketch the detail symbol for:
 - wood
 - brick
 - stone
 - concrete
 - concrete block
 - earth
 - glass
 - insulation
 - tile
 - plaster.
- locate and determine the following information from a specific section drawing:
 - sizes of framing lumber
 - design of sill and cornice
 - types of material for:
 - sheathing
 - wall surfaces
 - location of insulation.
 - door frames
 - window frames.

- Teacher leads discussion on interpreting detail drawings using transparencies.
- Students review illustrated text materials.
- Teacher develops activity/quiz worksheet on identification or sketching of detail plan symbols.
- Teacher encourages small peer group cooperation and interaction.

COMMON CLUSTER TASKS

Code: CON - CT14 TASK: Interpret information from section drawings

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Scale Legend Section Elevations Recognize symbols of the following components: door window plumbing fixture fireplace brick stone concrete concrete block flashing insulation Roof pitch Grade Fill Basement First floor Living room Dining room Kitchen Front Right side Left side Rear Garage	Idea of scale in actual application, i.e. 1 inch (on a model or drawing = 1 foot (on a real object). Primary architectural scale: 1/4" = 1'0" i.e. 1/4" on the drawing equals one foot on the building. Other common architectural scales: 1/8" = 1'0" (plot plan) 1/2" = 1'0" (detail and section drawings) 3/4" = 1'0" (section drawings)	- On flash cards students can associate plan symbols and meanings. - Given a room designation, select appropriate symbols, i.e. bath needs (plumbing, door, window - not fireplace). - Students choose to design a room drawn to scale. - Students participate in designing and coordinating a full house plan. - Students measure their own classroom and then draw it at the chalkboard or on paper at 1/4" = 1' scale, 1/2" = 1' scale, and 3/4" = 1' scale. - Be careful in using words with multiple meanings when talking to lip reading deaf students.
Supportive Instructional Materials: Flash cards Pins Paper Overhead transparencies with component name and symbol		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Interpret information from building specifications

Code: CON- CTL5

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods				
		Task-Related Competencies	Instructional Materials	Media	Bib.	
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will 1. identify specific information from building specifications regarding: a. electrical work b. grading/excavating c. masonry/concrete work d. sheetmetal work e. millwork and finish carpentry f. plumbing g. landscaping h. heating and air conditioning i. painting and finishing j. lathe and plaster or drywall k. rough carpentry/roofing l. room finishes m. tile work n. insulation, caulking, and glazing.	KNOWLEDGE A 6,9 NUMBERS B 4a, 5 APPLICATION C 6 PHYSICAL D 1a, 2a	Building specification forms <u>Modern Carpentry</u>, Unit 5	14	22	
Involved						
Productive						
Employable						
		- Teacher discusses overall importance and continued reference use of specifications during actual construction. - Students in small groups pick out a blueprint for a small home and develop a complete set of specifications. - Students review illustrated text materials and actual specification forms. - Para-professionals provide sustained involvement with students having difficulty with this task.				

COMMON CLUSTER TASKS

Code: CON - C113 TASK: Interpret information from building specifications

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Scale Legend Section Elevations Recognize symbols of the following components: door window plumbing fixture fireplace brick stone concrete concrete block flashing insulation Roof pitch Grade Fill Basement First floor Living room Dining room Kitchen Front Right side Left side Rear Garage	Idea of scale in actual application, i.e. 1 inch (on a model or drawing = 1' foot (on a real object). Primary architectural scale: 1/4" = 1' i.e. 1/4" on the drawing equals one foot on the building. Other common architectural scales: 1/8" = 1'0" (plot plan) 1/2" = 1'0" (detail and section drawings) 3/4" = 1'0" (section drawings)	• On flash cards students can associate plan symbols and meanings. • Given a room designation, select appropriate symbols, i.e. bath needs (plumbing, door, window, - not fireplace). • Students choose to design a room drawn to scale. • Students participate in designing and coordinating a full house plan. • Students measure their own classroom and then draw it at the chalkboard or on paper at 1/4" = 1' scale, 1/2" = 1' scale, and 3/4" = 1' scale. • Be careful in using words with multiple meanings when talking to lip reading deaf students.	
Supportive Instructional Materials: Flash cards Pins Paper Overhead transparencies with component name and symbol			

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Install cabinet hardware

Code: CON - C116

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify the different types of cabinet hardware: a. knobs b. pulls c. decorative fittings d. catches 1) rubber rollers 2) ball or bullet 3) friction 4) magnetic. 2. determine specific characteristics for selection: a. size b. style c. material d. finish. 3. demonstrate the procedures/techniques for installing finish cabinet hardware: a. layout attachment holes b. drill attachment holes c. attach with a screw through back of door d. other fastening procedures and techniques.	Task-Related Competencies	Instructional Materials	Media	Bib.
Involved		KNOWLEDGE A 3	Modern Carpentry	13	22
Productive		NUMBERS B 2,4a,i, 5	How to Build Cabinets for a Modern Kitchen	13	5
Employable		APPLICATION C 2,5 PHYSICAL D 1a,b,c,d,f 2b 3e,f,g	Cabinetmaking and Millwork "Cabinetmaking"	13 8	22 41

COMMON CLUSTER TASKS

Code: CON - CT16 TASK: Install cabinet hardware

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Knobs Pulls Metal fittings Hinges Catches Drilling jig Bits	Identify the center line of an object. Check for horizontal, vertical, level. Locate the center of a drawer facing which measures 4"x11 1/2".	- Teacher and deaf student should cooperatively develop some simple signs related to language of the task. - Emphasize that hardware installation represents the "finishing touch" on cabinet work and extreme attention should be given to avoid scratches, nicks, or dents.
Supportive Instructional Materials:		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Operate power machine tools

Code: CON- CF17

Student Name:

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods				
Introduced	Involved						
Productive	Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name specific power machine tools: a. radial saw b. table saw c. jointer d. power miter box. 2. recognize and observe specific safety precautions for operating power machine tools. 3. use and operate power machine tools following prescribed procedures. 4. identify and demonstrate the proper non-operating condition for each power machine tool.	• Students in small groups view filmstrips on operation and safety of power machine tools. • Teacher provides demonstration on use and operation of each machine. • Students take an oral quiz on operation of each machine. • Students receive an operator's license card and are certified to operate specific machines upon passing an operation/safety quiz.	Note: This task is performed as a part of several succeeding tasks.			
			Instructional Materials				
			Task-Related Competencies		Title	Media	Bib.
			KNOWLEDGE A 3,4,7,9		Modern Carpentry, Chapter 2	13	22
			NUMBERS B 4a,e		"Jointer"	12	12
		APPLICATION C 5,8	"Radial Arm Saw"	12	13		
		PHYSICAL D 1a,b,d 2b 3c,8	"Care and Use of Table Saw"	10	32		

COMMON CLUSTER TASKS

Code: CON - C117 TASK: Operate power machine tools

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Table saw Radial arm saw Jointer Band saw Panel saw Power miter box Belt disk sander Push sticks Fence	Saw blade sizes 8" - 12" Drill bit sizes 1/16" - 1/2" Measure and mark pieces of material to be cut. Discuss the word tolerance. "Amount of Allowable Error" i.e. rough construction may require plus or minus 1/8" accuracy. Ask residential construction instructor for examples.	• Students must develop sensitivity to safe use of tools and machines. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Stress the importance of being alert and respectful of others.
Supportive Instructional Materials: Catalogues, charts, Stanley 16mm films, and film loops		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Recognize common lumber sizes and defects

Code: CON - CE18

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods	Instructional Materials		
			Task-Related Competencies	Title	Media Bib.
Introduced Involved Productive Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. recognize the basic purposes for eliminating or minimizing the use of defective lumber. 2. identify the common dimension lumber thicknesses, widths, and lengths of construction lumber. 3. identify the following defects in selected lumber: a. bow/warp b. crook c. twist d. cup e. spike knot f. intergrown knots g. encased knots h. splits and checks i. decay.	• Teacher develops "hands-on" activity/quiz for class members to find examples of each lumber defect. • Students review illustrated text materials as a reference in checking lumber materials for defects and sizing. • Para-professionals provide sustained involvement with students having difficulty with this task.	KNOWLEDGE A 1,9	Modern Carpentry, Unit 4	13 22
			NUMBERS B 2, 4a	First Book of Lumber	13 19
			APPLICATION C 2,8		
			PHYSICAL D 1a		

COMMON CLUSTER TASKS

Code: CON - CT18 TASK: Recognize common lumber sizes and defects

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Plywood Dimension lumber Trim Particle board Underlayment Sheeting Celotex Fiberboard Masonite Asphalt tiles and shingles Stripping Undercourse Finished Kilns Millwork Moisture content Green lumber Lumber defects: knots: spike, intergrown, incased pin knots: small, medium, large splits and checks shakes pitch pockets honey combing wane decay warp	Dimension lumber Ex: 2"x4"x12' thickness is 2 inches width is 4 inches length is 12 feet Note: 2"x4"x12' represents rough size. finish size is 1 1/2"x 3 1/2"x 12' Sheet material measures 4'x8'. Thicknesses range from 3/16" to 5/4 (1 1/4)"	- Describe the processes from cutting the tree, sawing logs, drying the lumber, to buying finished lumber. - Be careful in using words with multiple meanings when talking to lip reading deaf students. (knot, trim, sheeting, green lumber) - Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
Supportive Instructional Materials:		
Request scraps from vocational education instructor or lumber companies		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Identify characteristics/applications of plywood materials

Student Name:

Code: CON - CT19

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - visually identify plywood grades: - hardwood - softwood. - read and interpret a plywood identification index. - name the common sheet sizes and nominal thicknesses of available plywoods. - identify the following characteristics for a given sheet of plywood: - size - exterior - interior - plys - face - grade - thicknesses - list the different applications for plywood in the building industry.	- Class takes field trip to building site to view applications or uses of plywood. - Teacher develops "hands-on" activity/quiz for students to identify characteristics of a given sheet of plywood. - Teacher provides demonstration on identification process. - Students view filmstrip. - Teacher encourages small peer group cooperation and interaction.	Modern Carpentry, Page 61 "Lumber Grades and Measurement" "Plywood Industry"	22 13 13 54
Involved		KNOWLEDGE		
Productive		A 5,9		
Employable		NUMBERS		
		B 1		
		APPLICATION		
		C 3,8		
		PHYSICAL		
		D 1a, 2a/b		

COMMON CLUSTER TASKS

Code: CON - CT19 TASK: Identify characteristics/applications of plywood materials

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Interior Exterior Grades A-A (best) D-D (poorest) A-C (common) Thickness Veneer Core Pre-finished Paneling Tongue-in-groove Oversize Beams Subfloor Stair treads Walls Roof Sheeting Underlayment Shelving Doors Laminated Glue Contact cement Adhesive Cross grain	Thickness - $3/4"$ laminated - $3/4"$ Nailing - nails spaced 4" apart - nailed both sides of seam - 6-8" into joists or studs Interpret the chart on the plywood. (i.e. 24/0 - suggested distance between studs in roof and sub- floor applications)	• Discuss reasoning behind odd number of plys in plywood. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Drill deaf student extensively on language of the task.
Supportive Instructional Materials: Modern Carpentry, Chapter 4 American Plywood Association information		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Assist in pouring sidewalks and drives

Code: CON - CT20

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods
Introduced	Involved		
Productive	Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify the common slab thicknesses for: a. driveways b. sidewalks. 2. select and manipulate tools for finishing sidewalks and drives: a. float b. edging tool c. bristle broom d. screed e. strike board. 3. describe the purpose of expansion joints for drives and sidewalks. 4. perform the following job skills: a. set forms with 1/4" per foot slope b. cut expansion joints c. pour and screed wet concrete d. add reinforcement mesh to driveway slabs e. finish concrete for texture and traction.	• Students simulate sidewalk construction in lab - mixing and pouring a reinforced slab with expansion joints. • Students review illustrated text materials. • Teacher designs experiment for class members to prepare different concrete mixtures and test their respective strengths. • Class visits a building site to see a sidewalk or drive being poured.

COMMON CLUSTER TASKS

Code: CON - CT20 TASK: Assist in pouring sidewalks and drives

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Slab Float Tamper Screed Edger Slope Expansion joints Mesh Concrete Broom Strike board	Recognize the ratio of 3:1 (concrete to aggregate). Cubic yard of materials: sand, gravel, weights 1 1/2 ton Determine the cost of 5 yards of ready mix concrete at \$20.00/yd. Compute the amount of concrete needed for a specific driveway, i.e. 6" thick x 6' wide x 18' long would require 1 cubic yard of concrete. .5'x6'x19' = 27 cu. ft. = 1 cu. yd. Measure for sidewalk cracks and expansion joints.	• Visit a site where a sidewalk/drive-way is being poured. • Drill deaf student extensively on language of the task. • Stress the importance of wearing boots, gloves, safety glasses. If cement gets on the skin it may be very painful if not washed off immediately.
Supportive Instructional Materials:		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Assist in installing weeping tile and waterproofing

Code: CON - CT21

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - describe the basic purpose of waterproofing foundations. - perform the following job skills in waterproofing block walls: - clean and dampen wall surface - mix plaster of cement and sand in proportions of 1" to 2 1/2" - apply first coat of mortar - when partially hardened, roughen with scratcher - allow to harden 24 hours - dampen surface - apply second plaster coat - form Cove of plaster on top of footing - add coat of asphalt waterproofing or hot bituminous coating if desired - waterproof poured walls by applying a bituminous coating. - describe the basic purpose of installing drain tile. - perform the following job skills for installing drain tile: - place drain tile next to footings 1/4" apart - lay on slope of 1" per 20' - cover tile joints with tar paper - cover tile with 6"-8" course gravel	- Students develop a scale cut-away model (1"=1'0") of a foundation - paint on waterproofing and glue in drain tile and aggregate. - Teacher discusses and describes the process and purpose of installing weeping tile and waterproofing a foundation wall. - Teacher makes contact with <u>each</u> student during the class period.	Modern Carpentry "Footings and Foundations"	13 22 12 29
Involved		KNOWLEDGE		
Productive		A 7,9		
Employable		NUMBERS		
		B 2b, 4a,5,6		
		APPLICATION		
		C 5		
		PHYSICAL		
		D 1a,d,e 2c 3 -		

COMMON CLUSTER TASKS

Code: CON - CP21 TASK: Assist in installing weeping tile and waterproofing

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Coarse gravel	Six (6) shovels of pea gravel = 1 cubic foot or 12'x12'x12'.	• Visit job site. • Stress the importance of keeping the waterproofing off clothing and skin. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Be careful in using words with multiple meanings when talking to lip reading deaf students. • Be careful in using words with multiple meanings when talking to lip reading deaf students.
Crushed stone	Twenty-seven (27) cubic feet = 1 cubic yard	
Weeping tile	Determine the number of 5 gal. containers of waterproofing needed to cover a wall.	
Excavation		
Slope		
Trench		
T shape		
Right angles		
Outlet		
Courses		
Seep		
Wooden float		
Metal float		
Trowel		
Tamping		
Supportive Instructional Materials:		
1 bag cement	Trowel (finishing)	Pea gravel
Sand and gravel (aggregates)	Float	
2x4 for footing forms	Edgers	
2x4 stakes for braces	Rake	
Shovel	Drain tiles	

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Finish unfinished cabinet facings

Code: CON - GT22

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - visually identify common cabinet woods, veneers, and laminates. - identify and describe the application of common cabinet finishes: - stains - waxes - oils - others. - prepare and apply specific finish for a given cabinet wood. - demonstrate different methods of applying finishes: - spray - brush - other. - determine the required drying time for specific finishes.	- Students cut and collect samples of cabinet woods. Experiment with different finishes on each. Analyze results. - Students review booklets. - Teacher concentrates his effort with students having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task.	"Finishing Wood" (booklet)	13 15
Involved		KNOWLEDGE A 3,7,9		
Productive		NUMBERS B 2, 4a, i		
		APPLICATION C 2,5,8		
		PHYSICAL D 1a,b,d,f 2c 3 -		

COMMON CLUSTER TASKS

Code: CON - CT22 TASK: Finish unfinished cabinet facings

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Facing strips Front Basic frame Framework face plate face frame Stiles vertical Rails horizontal Facing stock Plumb Adjacent Lip Lap joints Dowel joints	Recognize and understand the following as applied to a cabinet frame: horizontal vertical plumb	• Ask the vocational instructor or a supplier for mock-ups of unfinished cabinet facings. • Discuss the importance of plumbing walls. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Drill deaf student extensively on language of the task.
Supportive Instructional Materials: Plumb line, plumb bob Labeled pictures or mock-ups showing cabinet facings		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Finish counter tops

Code: CON - CT23

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify different counter top finish materials: - plastic laminate (formica) - others. - demonstrate the procedures/techniques for cutting and applying plastic laminates: - cut materials to rough oversize using a handsaw, tablesaw, portable saw, or portable router - apply contact band adhesive to both joining surfaces with a spreader, roller or brush - allow adhesive coats to dry - position surfaces to be jointed - use a hand roller to apply momentary pressure over laminate - trim and smooth edges of laminate with a plane, file, or electric router - make cutouts (for sinks, etc.) if needed, with saber saw - perform final edge smoothing and rounding with 400 wet-or-dry abrasive paper.	- Teacher provides demonstration of procedures/techniques for installing formica tops. - Students practice installation procedures by cutting and attaching lumber yard samples to a piece of plywood. - Teacher encourages small peer group cooperation and interaction. - Para-professionals provide sustained involvement with students having difficulty with this task.	Counter top samples (from local supplier)	1
Involved		KNOWLEDGE A 3,7,9 NUMBERS B 2, 4a,1 APPLICATION C 2,5,8 PHYSICAL D 1a,b,d,f 2c 3		
Productive				
Employable				

COMMON CLUSTER TASKS

Code: CON - CT23 TASK: Finish counter tops

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
High pressure laminate Plastic laminate Surface Bonded Plywood Smooth Dimensionally table Contact cement Coarse grain texture Moisture penetration Oversize Glossy Beveled	Common laminates are 1/16" thick. Contact cement covers approximately 300 sq. ft. per gallon. Compute the number of quarts needed for a job which you design.	• Discuss the types of abuses which will not hurt the standard counter top. • Be aware of manufacturer's directions. • Drill deaf student extensively on language of the task.
Supportive Instructional Materials:		

COMMON CLUSTER TASKS

Sheet 1 of 1

TASK: Install factory-built cabinets

Code: CON - CT24

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - Identify the availability forms of cabinets: - disassembled - assembled (unfinished) - assembled (finished) - Interpret the manufacturer's directions and specifications for installation/assembly: - installing shims and blocking to prevent rocking - attaching with screws through hanging strips into studs - attaching with toggle bolts to floor or wall - fastening units together with bolts and T-nuts - checking level and plumb of installed cabinet.	KNOWLEDGE	Modern Carpentry	13 22
Involved		A 3,9		
Productive		NUMBERS		
Employable		B 2,4a,i, 5		
		APPLICATION		
		C 3,6		
		PHYSICAL		
		D 1a,b,d 2d 3c,e,f,8		

COMMON CLUSTER TASKS

Code: C08 - C124 TASK: Install factory-built cabinets

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Mass produced Disassembled/assembled Standard unit Custom built Factory built Shims Blocking Stud framing Toggle bolts T-nuts Aligned	List several standard sizes of factory built cabinets from a supplier's catalog.	• Interpret manufacturer's instructions for installation. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). • Discuss the importance of plumb and level to cabinet setting.	
Supportive Instructional Materials:			

BUILDING MAINTENANCE/SERVICE

INSTRUCTIONAL TASK MODULES

- BM01 Brush sweep floor areas
- BM02 Clean stairwells
- BM03 Mop sweep floors
- BM04 Wet mop floors
- BM05 Operate an automatic floor machine
- BM06 Strip a floor
- BM07 Seal a floor
- BM08 Apply floor finish
- BM09 Wash painted surfaces
- BM10 Clean wall paper
- BM11 Wash wainscoted ceramic surfaces
- BM12 Wash walls and ceilings by hand
- BM13 Wash walls and ceilings by machine
- BM14 Wash and clean venetian blinds
- BM15 Clean and disinfect restroom equipment
- BM16 Disinfect restroom floors
- BM17 Clean and polish mirrors, windows, and glass
- BM18 Wash and polish metal, wooden and upholstered furniture
- BM19 Clean light fixtures
- BM20 Clean rugs and carpets
- BM21 Wash windows
- BM22 Clean metal surfaces
- BM23 Perform dusting
- BM24 Store maintenance supplies and equipment
- BM25 Schedule maintenance activities



SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Brush sweep floor areas

Code: CON - EN01

Student Name:

Student Progress	Behavioral Task Knowledge/sk Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media B1b.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed for sweeping floor areas: - floor brush - dust pan - counter brush - putty knife - waste container. - demonstrate the proper techniques for holding and sweeping with a broom. - demonstrate the proper procedure for sweeping floor areas. - remove gum and heavy accumulations from floor with putty knife. - pick up sweepings.	KNOWLEDGE A 6,9 NUMBERS B APPLICATION C 5,8 PHYSICAL D 1a,d,e 2b 3a,c,f,g	Students learn the names of the equipment from an illustrated set of flash cards. Flash cards with pictures and names of each piece of equipment. Gradually remove name cues.	13
Involved			Students work with the building custodians in sweeping assigned areas during each period.	13
Productive			Teacher encourages small peer group cooperation and interaction.	16
Employable			Floor Maintenance	13
			Floors and Floor Maintenance flash cards, teacher-made "School Custodial Service" (charts)	13

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BMD1 **TASK:** Brush sweep floor areas

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Hard floors terrazzo marble concrete Sweep Waste receptacle/trash can Brush floor counter Dust pan Area Soil Bristles Putty knife	Convert inches to feet Recognize 6'x6' as feet 6"x6" as inches	- Physical requirements: stand up straight grip, bend over from hips step out and extend arms straight ahead. - Collect samples of different types of floors. - Make and use "flash card" floor samples. - This task may be particularly appropriate for deaf student. - Teacher and deaf student should co- operatively develop some simple signs related to language of the task.
Supportive Instructional Materials: "Twister" game - teacher made, combining word recognition with concepts and motor skills		

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Clean stairwells

Code: CON - BMO2

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the proper equipment for cleaning stairwells: - warehouse broom (corn broom, dry mop) - dust pan - counter brush - waste container - treated dust cloth - putty knife - portable vacuum cleaner - disinfectant solution - detergent/disinfectant solution - two mop pails - wringer - wet mop "wet floor" signs. - brush sweep stairways from top to bottom. - wipe down guard and hand rails and door knobs. - vacuum clean stairwells, wainscoating, and guard rails. - prepare disinfectant solution for mopping stairway. - mop down stairwells. - place "wet floor" signs at top and bottom of stairwell.	- Teacher carefully illustrates and/or demonstrates techniques for: - Identifying different types of stairs (i.e. open wall, both walls closed) - Sweep width of stairs, stairs with middle rails or end rails - Starting to sweep stairs considering the type of stairwell - Using the proper broom or hand vacuum in corners of stairs. - Students discuss and practice techniques for: - Folding dust cloth properly - Dusting above windows or landings - Traveling up one side of stairs to dust, then dusting down the other side - Cleaning stairs with dust mop, then scrub down stairs and risers.	Cleaning Supplies and Equipment 1	
Involved		KNOWLEDGE		
Productive		A 2,3,9		
Employable		NUMBERS		
		B		
		APPLICATION		
		C 5,6,8		
		PHYSICAL		
		D 1a,e, 2b, 3a,b,c,f,g		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BM02 **TASK:** Clean stairwells

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Stairs	Measure width of stairs using ruler.	- Physical requirements: travel up and down stairs slide feet together across step starting at top back down stairs using stair hand rail use rag in one hand and another rag in other hand. - Have students practice cleaning as they go, up and down mock stairs with removable slides and rails. - This task may be particularly appro- priate for deaf student. - Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.
Risers	Measure height of riser between steps and width of step (tread).	
Railling/bannister		
Landing		
Treads		
Molding		
Wipe		
Width		
Steps		
Floor brush		
Dry mop		
Stroke		
Terrazzo		
Wood		
Concrete		
Supportive Instructional Materials:		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Mop sweep floors

Code: CON - BM03

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Btb.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed to mop sweep a floor: - dust treated sweeping mop - dust pan - counter brush - floor brush - waste container - putty knife - receptacle. - treat a sweeping mop with a mop treatment. - treat a dusting mop by water-based impregnation and oil based impregnation. - follow a prescribed procedure in mop sweeping: - room floors - corridors.	- Teacher demonstrates and illustrates: - Swinging in a figure "8" motion - Carrying, handling, and treating a dust mop - Sweeping around chairlegs without touching - Sliding dust back and forth across front of feet - Identifying types of floors - Discussing harm of solvents on soft floor (lighter fluid) - Spreading feet to width of shoulders. - Teacher concentrates his effort with students having difficulty.	Cleaning Supplies and Equipment	1
Involved		KNOWLEDGE A 6,7,9		
Productive		NUMBERS		
Employable		APPLICATION C 8 PHYSICAL D 1a,e, 2b, 3a,c,8		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON- BMC3 **TASK:** Mop sweep floors

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Sweep Treated dry mop Horizontal Dispose Soft floors vinyl tile rubber tile asphalt tile Swing Block Stance Stroke High/low Corridor Hallway	Determine linear footage of a given wall. Recognize common mop sizes: 18", 36", 60"	Physical requirements; draw a figure 8 move arms in figure 8 pattern back-up mopping in a figure 8 pattern.
Supportive Instructional Materials:		
Yard stick "Twister" game		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Wet mop floors

Code: CON - BM04

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. select the equipment needed in wet mopping floors: a. 2 mop pails on casters b. 1 wet mop (2) mops c. putty knife d. waste container e. dust pan f. cleaning cloths or sponges g. detergent or detergent/disinfectant h. "wet floor" signs i. wringers. 2. prepare detergent or detergent/disinfectant solution according to manufacturer's directions. 3. locate wet floor signs at both ends of area to be mopped. 4. follow prescribed procedures and techniques in mopping floor areas. 5. rinse and clean mop heads and equipment. 6. store equipment.	KNOWLEDGE A 6,7,9	Cleaning Supplies and Equipment	1
Involved		NUMBERS B 4b,c, 5		
Productive		APPLICATION C 5,6,8		
Employable		PHYSICAL D 1a,d,e 2b 3a,b,c,g		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CCN - BM04 TASK: Wet mop floors

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Wet mop filler Size/capacity Wringer Bucket Detergent Solution Soak Mop handle Clamp Wing nut Crown Gear press Roller wringer Squeeze wringer	Determine the square footage of a floor area to be mopped. Recognize comparative sizes and capacities of buckets - gallons, pails - pints. Teach: one half ounce per gallon. Pour one half ounce into a measuring cup from a bottle having the net weight of 8 oz. Pour the half ounce into a gallon of water. Observe 8 oz. bottle, determine how many times this operation could be performed.	- Physical requirements: walk backward swing arms while walking backwards drag mop along molding. - Using foot square shapes, measure the square footage of a small room by laying the shapes out - determining the number which will fit in the room. - Stress importance of using proper cleanser and tool for each task. - This task may be particularly appropriate for deaf student.	
Supportive Instructional Materials: Squares of cardboard measuring a foot square. Enough to cover a small room.			

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

TASK: Operate an automatic floor machine

Code: CON - BM05

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed to operate a floor machine: - floor machine - detergent (low foam or foamless) - putty knife "wet floor" signs. - fill solution tank of machine, following manufacturer's directions. - prepare machine for operation. - police area to be cleaned. - place "wet floor" signs in position. - clean corner areas by hand. - guide machine over area to be cleaned, following prescribed procedures and techniques. - dispose of accumulated waste, rinse, flush tank, and plug automatic machine into battery.	- Teacher simulates and/or demonstrates: - Gripping machine, turning on switch, and holding machine as it runs - Pushing down on handle to start and raising up on handle to stop - Turning on vacuum and adjusting squeegee up or down - Changing brushes and stripping pads - Filling and emptying the machine. - Teacher concentrates his effort with students having difficulty. - Teacher matches successful students who are interested in helping those having difficulty.	Floor machine, accessories, and cleaning materials 1	
Involved		KNOWLEDGE A 2,6,7,9 NUMBERS B 4c, 5 APPLICATION C 5,6 PHYSICAL D 1a,d,e 2c 3a,b,c,f,g		
Productive				
Employable				

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Code: 0005 - 10005 TASK: Operate an automatic floor machine

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Charge/recharge battery	Combine liquid amounts in a 1-6 ratio (1 part concentrate to 6 parts water.	Suggestions: - This task may be particularly appropriate for deaf student. - Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). - Physical requirements: - cross feet over and move to left - cross feet back and move to right - walk straight ahead - back up - straight back.
Automatic		
Scrubber	Add $1/2$ pt + $1/2$ pt = ?	
Stripper	$1/2$ pt. equals how many cups?	
Vacuum	Determine the number of ounces/cup.	
Float		
Tank		
Switch		
Handle		
Operate		
Solution		
Supportive Instructional Materials:		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Sheet 1 of 2

TASK: Strip a floor

Code: CON - B306

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Instructional Materials		
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed for stripping a floor: - rotary floor machine - stripping bloc - Syndisc stripping pads - liquid floor stripper - waste container - dust pan - counter brush - putty knife - treated dust cloth - rubbers - pressure sprayer - mop pail - gearpress - wet mop - wet vacuum pick-up. - mix stripping solution following manufacturer's directions. - sweep floor and remove all gum deposits. - apply stripping solution to floor area, covering 100 square feet. - place stripping pad on floor and center machine on pad. - guide the rotary floor machine over the solution area. - pick up the dirty stripping with wet vac.	Task-Related Competencies	Title	Media Bib.
Involved		KNOWLEDGE A 2,3,7,9 NUMBERS B 2b,4a,c,5 APPLICATION C 5,6,8 PHYSICAL D 1a,d,e,f 2c 3a,c,d,e, f,g	Cleaning equipment, tools, and supplies	1
Productive				
Employable				

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - 3406 **TASK:** Strip a floor

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Strip	Determine square footage of a floor area to be stripped	• Transfer liquid between pint, quart, and gallon size containers to explain the volume of liquid contained by each. • Practice body movement for task. • Physical requirements: - push out - pull back - step out - step back - stoop over - kneel down on one knee - turn both hands to right - turn both hands to left - slide from side to side - move straight back - move straight forward. • Be careful in using words with multiple meanings when talking to lip reading deaf students. • This task may be particularly appropriate for deaf student.	
Refinish	Convert gallons to quarts, quarts to pints, and pints to cups of solutions used in floor stripping		
Stripping pad	Pour from a large 5 gallon container a predetermined amount, i.e. qt., to a pail		
Driving block	Concept of pH - > < 7 =		
Floor machine			
Solution			
Detergent			
Steel wool			
Finish			
Build-up			
Residue			
Nozzle			
Swivel			
Tank			
Cord			

Supportive Instructional Materials:

SUBCLUSTER:

Sheet 2 of 2

TASK: Strip a floor

Student Name:

Code: C0X - B006

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods		
Introduced		Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 8. rinse floor again with neutralizing solution if high pH solution has been used. 9. strip corners by hand. 10. strip near molding with steel wool.			
Involved					
Productive					
Employable					
			Task-Related Competencies	Instructional Materials	
			KNOWLEDGE	Title	Media Bib.
			NUMBERS		
			APPLICATION		
			PHYSICAL		

SUBCLUSTER: BUILDING MAINTENANCE/SERVIC

Code: CON - BMD6 TASK: SERVIC 1/Floor

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Supportive Instructional Materials:		

SUBCLUSTER: BUILDING MAINTENANCE SERVICE

TASK: Seal a floor

Code: CON - B007

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed to seal a floor: - mop pail and gearpress - clean wet mop - water emulsion seal "wet floor" signs. - remove the sizing in a new wet mop. - seal floor by application of sealer with mop, following a prescribed procedure. - even out spots and mop out puddles of sealer. - apply second coat of sealer in opposite direction of first coat.	- Teacher simulates and demonstrates: - Laying out a 100 sq. ft. area by going along molding for 10' and across molding for 10'. - Applying sealer with mop and/or rollers. - Teacher discusses with students various surface seals, penetrating seals, concrete seals, terrazzo seals. - Para-professionals provide sustained involvement with students having difficulty with this task.	Cleaning supplies and equipment	
Involved		KNOWLEDGE A 2,7,9		
Productive		NUMBERS B 4c, 5		
Employable		APPLICATION C 5,8		
		PHYSICAL D 1a,d,e, 2c 3a,c,f,g		

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Code: CON - BM07 TASK: Seal a floor

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Floor seal	Estimate and/or compute square footage as it relates to floor areas.	- Stress that if the directions on can designate a given amount for a given size floor, and there is either solution left over or not enough solution, an inaccurate amount has been applied. - Assist student in improving judgment and decision making skills. - This task may be particularly appropriate for deaf student. - Drill deaf student extensively on language of the task.
Pores	Recognize gallons, quarts and similar sized containers.	
Absorbent	Convert ounces to pints, quarts, and gallons.	
Streaks	Estimate amount of sealer needed for 900 square feet if the coverage was 1500-2000 sq. ft. per gallon.	
Dampness		
Humidity		
Tacky		
Applicator		
Handle		
Mop filler		
Wringer		
Bucket		
Internally		
Undercoat		
Non-flammable		
Supportive Instructional Materials:		

SUBCLUSTER: BUILDING MAINTENANCE / SERVICE

Sheet 1 of 1

TASK: Apply floor finish

Code: GON - BMOB

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment for application of floor finishes: - mop bail with gearpress - clean wet mop - floor finish "wet floor" signs. - remove sizing from a new mop. - apply floor finish with mop, following a prescribed procedure. - apply second coat of finish in a cross-hatched manner. - determine drying time required for specific finishes. - soak or dispose of mop.	- Students simulate as teacher demonstrates how to: - go along molding for 10' - go across molding for 10' - come down floor for 10' - apply finish with mop - apply finish with rollers. - Teacher encourages small peer group cooperation and interaction. - Teacher matches successful students who are interested in helping those having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task.		
Involved		KNOWLEDGE A 2,7,9		
Productive		NUMBERS B 4c,d		
Employable		APPLICATION C 4,5,6		
		PHYSICAL D 1a,d,e, 2c 3a,c,g		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON- EN08 **TASK:** Apply floor finish

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Floor finish Floor wax Conventional wax plant or animal Synthetic wax man made Solids Liquid Streaks High-low spots Sealer Coats (recoat) Thin Protection Spread	Discuss relationship of length, width, and square area. Estimate the time needed to finish certain areas. Discuss the relationship of temperature and humidity to drying of wax. Wax coverage 2,000 to 2,500 sq. ft. per gallon. Figure cost of bulk amounts if purchased in small containers.	• It is important to follow a definite procedure as prescribed by the supervisor. • Drill deaf student extensively on language of the task. • Assist student in improving judgment and decision making skills.
Supportive Instructional Materials:		

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Wash painted surfaces

Code: CON - B109

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed for washing painted surfaces: - detergent-disinfectant - sponges or turkish towel - two buckets - drop cloths - step ladder "wet floor" signs - rubber gloves - wet mop - mop bucket - gearpress - wall brush. - test surface for washability. - prepare detergent-disinfectant solution according to manufacturer's direction. - sponge wash wall surfaces following prescribed techniques and procedures. - rinse washed wall sections. - set up platform stages or step ladders safely. - clean and store equipment.	KNOWLEDGE		
Involved		A 2,7,9		
Productive		NUMBERS		
Employable		B 4c,5		
		APPLICATION		
		C 5,6		
		PHYSICAL		
		D 1a,d,e		
		2c		
		3a,c,8		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - B309 **TASK:** Wash painted surfaces

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Sponge Pails Lint free cloths Solution Furniture Glazed walls Soap Wall paper cleaner Drop cloths (many kinds)	Combine and prepare solutions of 1 part to 6 parts. Use measuring cups and interpret units of measure. Determine square footage of a wall surface. Determine linear footage of a wall surface.	• Stress importance of using proper cleanser and tool for each task. • This task may be particularly appropriate for deaf student. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf student. • Have student use his imagination in a game, "what would happen if. . .", i.e. "wet cloth hit mirror or window". Leave time for class to agree or disagree.	
Supportive Instructional Materials:			

SUBCLUSTER: BUILDING PLANNING AND DESIGN

TASK: Clean wall paper

Code: C01 - B111

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media B1b.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed for cleaning wallpaper: - launder - wall paper cleaner - drop cloths - cleaning cloths. - move furniture. - cover furniture. - remove everything from wall. - cover floors. - brush walls. - begin at top, work down. - clean a space 2'x 2'. - cross clean. - work dirt into wall cleaner. - brush residue from walls. - vacuum floor. - return equipment.	- Give students samples of washable paper and have them wash half the sheet with damp cloth and the other half with a soaking wet cloth and observe the effects. - Student follows a teacher demonstration with "hands-on" supervision. - Teacher matches successful students who are interested in helping those having difficulty.		
Involved		KNOWLEDGE A 7		
Productive		NUMBERS		
Employable		APPLICATION C 5 PHYSICAL D 1a,d,e 2b 3a,c,f,g		

SUBCLUSTER: BUILDING MAINTENANCE

Code: 005 - 2410 TASK: Clean wall paper

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Sponge Pails Lint free cloths Solution Streak Vacuum Glazed walls Soap Wall paper cleaner Drop cloths	Combine and prepare a solution of 1 part to 6 parts. Use measuring cups and interpret units of measure. Recognize wall surface area 2'x2'/determine square footage. Measure linear footage of a classroom wall.	- This task may be particularly appropriate for deaf student. - Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. - Working with actual measuring equipment and water will simulate this activity.

Supportive Instructional Materials:

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

TASK: Wash wainscoted ceramic surfaces

Student Name: _____

Code: CON - BML

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed for spray washing wainscoted ceramic surfaces: - detergent-disinfectant - two pressure sprayers - cellulose sponge mop with long handle "wet floor" signs - drop cloths - wet mop - mop bucket - gearpress - prepare detergent or detergent/disinfectant solution according to manufacturer's directions. - fill separate sprayers with solution and clean water. - spray clean wainscoted surface with sprayer, following a prescribed procedure. - spray the area washed with clean water. - wipe down wainscoting with mop sponge. - rinse and clean sprayers and equipment.	- Students work with surplus pieces of tile on which common cleaning problems can be identified and solution applied. - Teacher concentrates his effort with students having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task.		
Involved				
Productive				
Employable				

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON- BML1 **TASK:** Wash wainscoted ceramic surfaces

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Common essential vocabulary from bottles and can containers Procure cleaning supplies from maintenance instructor and have students make a list of the words in the directions that they don't understand. Class put together a list of directive words most frequently used for vocabulary study.	Interpret ounces, pints, quarts, half-gallon, gallons, of cleaning solutions and agents. Determine square footage of the area to be washed and needed amount of cleaning solution.	• Be sure students are able to read common manufacturer's directions, i.e. shake well before using. • Stress importance of using proper cleanser and tool for each task. • This task may be particularly appropriate for deaf student. • Drill deaf student extensively on language of the task.
Supportive Instructional Materials:		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

TASK: Wash walls and ceilings by hand

Code: CON - BM12

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed to hand wash ceilings: - detergent-disinfectant - sponges or turkish towels - two buckets or pails - drop cloths - platform stages - rubber gloves "wet floor" signs. - prepare detergent or detergent/disinfectant according to manufacturer's directions. - cover unmovable obstructions with drop cloths. - step up platform stage. - hand wash ceiling areas following prescribed procedures. - clean overhead pipes around electrical fixtures, etc., when washing ceilings and walls. - rinse and clean equipment.	- Students work with building custodian performing the identified job skills. - Teacher encourages small peer group cooperation and interaction. - Para-professionals provide sustained involvement with students having difficulty with this task.	<u>Building Maintenance</u>	13
Involved			<u>Janitor-Custodian</u>	13
Productive				
Employable				

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - PM12 **TASK:** Wash walls and ceilings by hand

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Pails Natural sponges Abrasive cleaner Wall brush Wall cleaner Drop cloths Ledges, ducts Measure Directions Soaking Loosen Scrubbing Washing Dip Solution	Measure liquids (water) with a measuring cup, observe number of ounces in 1/4 cup, 1/3 cup, 1/2 cup, and 1 cup. Find area of a wall 8'x12' to determine square footage of surface. Measure classroom, length and height of room. Determine the number of pints in a quart, cups in a pint, quarts in a gallon by actually performing the operation using measuring utensils and water or other suitable media.	• This task may be particularly appropriate for deaf student. • Drill deaf student extensively on language of the task. • Suggest to parents that tasks be reinforced and experienced in the home environment.

Supportive Instructional Materials:

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Wash walls and ceilings by machine

Code: CON - BUI3

Student Name:

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods									
		Task-Related Competencies	Instructional Materials								
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed to wash walls/ceilings by machine: - wall washing machine - trowels - detergent/disinfectant - stepladder or platform stage "wet floor" signs - sponge, brush, cloths (drop). - test wall or ceiling area for washability. - fill cleaning tank of machine according to manufacturer's instruction. - fill rinse tank. - pressurize tanks according to manufacturer's instructions. - set up platform stage or stepladder and wet floor signs. - saturate wash and rinse pads of applicator. - wash surface areas with machine following a prescribed procedure. - rinse, clean, and store equipment.	KNOWLEDGE	<table><tr><th>Title</th><th>Media</th><th>Bib.</th></tr><tr><td colspan="3"></td></tr></table>			Title	Media	Bib.			
Title		Media				Bib.					
Involved											
Productive											
Employable											

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BML3 **TASK:** Wash walls and ceilings by machine

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Mechanical Furniture Plastic Pressure Sponge Wall washing Measure Trowel Stubborn Apply Rub Pail Scrub brush Drop cloth Planks Step ladder Towels	Introduce pounds per square inch of pressure which corresponds to a reading of a pressure gauge, i.e. 25 pounds/sq.inch. Measure 6'x 20' and determine square footage. Utilize measuring cups in determining equivalent units.	• Drill deaf student extensively on language of the task. • This task may be particularly appropriate for deaf student.
Supportive Instructional Materials:		

TASK: Wash and clean venetian blinds

Code: CON - BNL4

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment for cleaning venetian blinds: - pressure sprayer - garden hose with nozzle - bristle hand brush - sponges - detergent/disinfectant - portable vacuum cleaner - buckets. - prepare detergent/disinfectant according to manufacturer's directions. - spray solution over blinds with pressure sprayer. - brush blinds with solution. - rinse with garden hose. - wipe both sides with sponges. - check tapes and cords for wear. - replace worn tapes. - vacuum clean venetian blinds in place.	KNOWLEDGE A 2,6,7,9 NUMBERS APPLICATION C 5,8 PHYSICAL D 1a,d 2c 3c,8		
Involved				
Productive				
Employable				

- Using a small venetian blind, the teacher will let each student disassemble and then try to reassemble it. Before the student reaches the point of destructive frustration, the teacher or another student who is already capable of performing this task will help the first student complete the reassembling process.

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BM14 **TASK:** Wash and clean venetian blinds

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Venetian blinds Tapes Detergent Solution Wash Rinse Deposits Film Removal Damp Dirt Damage	Counting 1, 2, 3, 4, 5, etc., (number of slats in a venetian blind) How many slats = a dozen slats? How many feet in a yard? How many inches in a yard, in a foot?	• This task may be particularly appropriate for the deaf student. • Suggest to parents that tasks be reinforced and experienced in the home environment. • Stress importance of using proper cleanser and tool for each task. • Use small sample blind, remove tapes, then reassemble.
Supportive Instructional Materials: A venetian blind		

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Clean and disinfect restroom equipment

Code: CON - BML5

Student Name:

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed to clean restroom equipment: - applicator kit - acrylian swab - bowl cleaner and disinfectant - aerosol disinfectant spray - deodorant blocks - cream cleanser - mop buckets - pails - rags - rubber gloves - mops - sponges - dust pans - putty knife - receptacle - towels-tissue-soap. - clean and disinfect a toilet bowl and seat. - clean and disinfect a urinal. - clean a washbowl. - free clogged drains.	KNOWLEDGE A 2,9	Title	Media Bib.
Involved		NUMBERS		
Productive		B 4c		
Employable		APPLICATION C 5,8		
		PHYSICAL D 1a,d 2b, 3g		

- Students may view slides showing cleaning procedures then go into restrooms to consider possible cleaning procedures.
- Involve students in discussion following a demonstration of cleaning procedures conducted in the restroom.
- Display the necessary cleaning agents:
 - Best disinfectant soap, water and labor
 - Carbolic acid as disinfectant - chlorine sodium hypochlorite to prevent athlete's foot.

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Code: 100 - 1011 TASK: Clean and disinfect restroom equipment

Basic Information for Cooperative Teaching		Suggestions
Language of the Task	Quantitative Concepts	
Urinal	Figure square footage area of a restroom (8'x12').	• Speak distinctly and slowly, use simple sentences, and look directly at lip-reading deaf students. • This task may be particularly appropriate for deaf student. • Stress importance of using proper cleanser and tool for each task. • Special attention must be paid to the safe handling of caustic cleaning materials.
Swab	Measure liquid quantities in pints, quarts, gallons, cup, ounces.	
Toilet	Reduce quarts to cups using liquid measuring cups.	
Commode	Reduce gallons to pints using liquid measuring cups.	
Water closet	Be aware of the change to metric measurements. Check with the maintenance supervisor/teacher.	
Dispenser		
Tissue		
Towel		
Washbasin		
Partitions		
Traps		
Mirrors		
Chrome		
Bright work		
Disinfectant		
Supportive Instructional Materials:		

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Disinfect restroom floors

Code: CON - BM16

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed in disinfecting a restroom floor: - detergent-disinfectant - wet mop - buckets and gearpress - pressure spray - putty knife - door stop. - prepare detergent-disinfectant solution according to manufacturer's directions. - mop or spray down solution over complete floor area. - pick up dirty solution with wet mop. - allow floor area to dry sufficient length of time. - clean and store equipment properly.	- Class members get involved in identifying brand names and the uses of the cleaning product. - Teacher may wish to set this up as a game with points for successfully naming and stating uses of product.
Involved		
Productive		
Employable		
Task-Related Competencies		Instructional Materials
KNOWLEDGE A 2,9 NUMBERS B 4b,c APPLICATION C 5,8 PHYSICAL D 1a,d 2b 3g		Title Media Bib.

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CQCN - 10116 TASK: Disinfect restroom floors

Basic Information for Cooperative Teaching		
Language of the Task	Quantitative Concepts	Suggestions:
Sanitize Spray Solution Disinfectant Germicide Toxic Dispenser Deodorant block Door stop Equipment	Convert pints to cups.	

- This task may be particularly appropriate for deaf student.
- Drill deaf student extensively on language of the task.
- This is an excellent time to improve the image of the Hospital Housekeeper/Building Service by bringing in an aide who has done a good job with dignity, stressing the relationship between a clean floor and reinfection of a patient.

Supportive Instructional Materials:

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Clean and polish mirrors, windows, and glass

Code: CON - B117

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select and use cleaning and polishing tools and materials (exterior and interior): - soft cloth - chamois - soft sponge - window brushes - poles - squeegees - window platform - razor blade. - demonstrate the procedures/techniques for cleaning glass: - windows (interior/exterior) - case glass - cupboards - shelves - transoms - glass fixtures - light bulbs - globes - glass of wall pictures. - determine the frequency of glass cleaning. - observe safety precautions in cleaning exterior glass surfaces.	- Students work with school building custodian performing the identified job skills. - Students review illustrated text materials. - Teacher, student, and/or resource aide shows evidence of understanding the squeegee method by demonstrating in horizontal and vertical strokes with water on a cloth. - Class to exhibit spray cleaning method in a similar manner. - Summary cleaning lecture including: - Kerosene - ammonia in water - Safety, safety belts, stepladders,, platforms.	<u>Building Maintenance</u> <u>Janitor-Custodian</u>	13 13
Involved		KNOWLEDGE A 9 NUMBERS		
Productive		APPLICATION C 5,6,8 PHYSICAL		
Employable		D 1a,d 2a 3b,c		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BML7 **TASK:** Clean and polish mirrors, windows, and glass

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Bulbs, light	Students interpret bucket which is full, 3/4 full, 1/3 full, etc.	• Be sure students are aware of common directions on cans, i.e. shake well before using, use in well ventilated room, etc. • Stress importance of using proper cleanser and tools for each task. • This task may be particularly appropriate for deaf student. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Observe the classroom and discuss some common cleaning procedures necessary for maintenance.	
Fixture			
Polish	Distinguish between quarts and pints.		
Window	Figure equivalents, i.e. how many cups in 1/2 pt.		
Squeegee	Abbreviations for liquids.		
Picture			
Globe			
Glass			
Sheen			
Furniture			
Soak			
Chamois			
Detergent			
Window brush			

Supportive Instructional Materials:

Cleaning materials in containers including directions
Collection of cleaning supplies and utensils

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Wash and polish metal, wooden and upholstered furniture

Student Name: _____

Code: CON - B318

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed to clean furniture: - two pails - detergent solution - furniture polish - clean, dry cloths - sponge - putty knife - treated dustcloth. - mix detergent in 1/2 pail of warm water as per manufacturer's directions. - cover floor with drop cloth. - clean furniture with wet cloth or sponge. - damp wipe furniture following washing. - wipe furniture with dry cloth. - lightly polish furniture using furniture polish and clean, dry cloth.	- Students prepare a display and label a variety of polishing materials. - Teacher concentrates his effort with students having difficulty. - Teacher makes contact with each student during the class period. - Teacher encourages small peer group cooperation and interaction.		
Involved		KNOWLEDGE A 2,9		
Productive		NUMBERS B 4c		
Employable		APPLICATION C 5,9		
		PHYSICAL D 1a,d,f 2b 3c,g		

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Code: CON - BM18

TASK:

Wash and polish metal, wooden and upholstered furniture

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Polish	Define: net 32 fl. oz. (1 qt)	• Make students aware that different color dust cloths come from different cleaning services. • Stress importance of using proper cleaner and tool for each task. • This task may be particularly appropriate for deaf student. • Drill deaf student extensively on language of the task.
Furniture	Work with measuring cups to illustrate and practice liquid equivalents, i.e. 1/2 pint equals how many cups?	
Plastic pail		
Cloths		
Solution		
Sponge		
Circular motion		
Stubborn marks		
Steel wool		
Surface		
Soil		
Desk		
Legs		
Lightly		
Brass		

Supportive Instructional Materials:

Collection of tools and supplies labeled by name and identified use

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Clean light fixtures

Code: CON - BML9

Student Name:

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed for cleaning light fixtures: - pail of warm water - low foam detergent - stepladder - two dry cloths - cellulose sponge - pliers - feather duster - small brush - starter - replacement fluorescent tubes. - prepare detergent/water cleaning solution, following manufacturer's directions. - set up ladder and spread drop cloths, canvas, or plastic. - remove and clean globe of incandescent light fixture. - clean/dust incandescent light fixture. - remove and clean reflectors and tubes in fluorescent light fixtures.	Resource person who is currently employed demonstrates and simulates how to: - set up stepladder - move ladder to be under fixture - carry glove in one hand, hold on to ladder with other - wash a glove - replace a tube - remove reflectors - perform job safety - choose cleaning agents. Teacher encourages small peer group cooperation and interaction. Teacher matches successful students who are interested in helping those having difficulty.		
Involved		KNOWLEDGE A 2,9		
Productive		NUMBERS		
Employable		APPLICATION C 5,9 PHYSICAL D 1a,c,d,e 2c 3a,b,c,g		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BM19 **TASK:** Clean light fixtures

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Fluorescent	Figure measured lengths of fluorescent bulbs (tubes) 5'-12'.	- Physical requirements: travel up ladder with one hand holding rung open and close ladder slide ladder across floor. - This task may be particularly appropriate for deaf student. - Drill deaf student extensively on language of the task.	
Inconducent	Interpret voltage and wattage of bulbs.		
Reflector			
Lamp			
Tube			
Scaffold			
Ladder			
Erect			
Pliers			
Screw driver			
Bulbs			
Supportive Instructional Materials:			

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 2

TASK:

Clean rugs and carpets

Code: CON - B420

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed for rug cleaning: - upright or tank type vacuum cleaner - spotting kit - untreated dust cloths - treated dust cloths - pile brush - detergent/disinfectant - floor machine - measuring cup - pails - wet/dry vac - shampoo. - dry vacuum clean rugs. - use "pile lifter" vacuum machine on rugs once a week. - clean dust bag on vacuum. - shampoo rug using rotary machine with automatic detergent feed. - comb or brush the nap of the rug uniformly. - allow rug to dry and vacuum. - clean a rug by the dry process method (powders-granules).	- A field trip to a rug cleaning service could show a student cleaning processes such as: - Spotting carpets using spotting brush - Pushing vacuum cleaner back and forth - Mixing solution - Filling tank. - Teacher and/or students could assemble samples of carpets including nylon, wool, cotton, acrylics, etc., for the students to handle, observe and on which to try out cleaning materials and methods. - Teacher demonstrates how to stroke vacuum cleaner, how to empty filter bag, and how to vacuum stairs.		
Involved				
Productive				
Employable				

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON- EN120 **TASK:** Clean rugs and carpets

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Carpet Rugs Spotting kit Stains Vacuum cleaner Pile lifter Filter bags Wet shampoo Dry shampoo Broadloom Synthetic Conventional Wool - cotton	Distinguish between pints, quarts, gallons of cleaning agents. Figure size of carpet (in square yards) in a room 9'x12'. Figure amounts of cleaning agents needed to clean the 9'x12' carpet. Figure drying time in hours or minutes.	• Identify types of carpet and the difference between rugs and carpets. • This task may be particularly appropriate for deaf student. • Assist student in improving judgment and decision making skills.	
Supportive Instructional Materials:			

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

TASK: Clean rugs and carpets

Student Name: _____

Code: CON - BM20

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods
Introduced		Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 9. identify common rug stains. 10. test rug for colorfastness. 11. spot clean rug by using either of the two types of spotters a. wet side water base b. dry side-solvent base.	
Involved			
Productive			
Employable			
			Instructional Materials
			Title
			Media
			Bib.
		Task-Related Competencies	
		KNOWLEDGE	
		NUMBERS	
		APPLICATION	
		PHYSICAL	

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

TASK: Clean rugs and carpets

Code: CON - BM20

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Supportive Instructional Materials:		

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK:

Wash windows

Code: CON - BM21

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods	Instructional Materials	
			Task-Related Competencies	Title Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the equipment needed for window washing: - glass cleaner - squeegee - chamois (sheep skin) - sponge - stepladder - pail or bucket - window washing ladder. - set up and position stepladder safely. - wash window with glass cleaner solution, using a sponge. - dry the window by using a squeegee and/or chamois. - clean outside surfaces of windows using a safety belt. - wash and clean chamois.	- Instructor or resource person demonstrates how to: - Use window pole and brush - Apply pressure to pole while removing water - Apply water with window brush - Use horizontal and vertical strokes - Use figure 8 motion - Safely handle ladders, platforms, and belts. - Teacher concentrates his effort with students having difficulty. - Teacher encourages small peer group cooperation and interaction.		
Involved			KNOWLEDGE	
Productive			NUMBERS	
Employable			APPLICATION	
			PHYSICAL	

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BM21 **TASK:** Wash windows

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Cloths	Edges	Determine length and width of window.	• This task may be particularly appropriate for deaf student. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Stress importance of using proper cleanser and tool for each task. • Alert student to the need for safe, and careful workmanship.
Steelwool		Utilize symbols for feet ' - and for inches ".	
Spray cleaner		Determine capacity of bucket by sight (16 qt., 8 gal., number of gallons).	
Glass			
Polish			
Streaks			
Finger marks			
Chamois (sheep skin)			
Window brush			
Scaffold			
Putty knife			
Squeegee pole			
Shake			
Scrape			
Excess			
Supportive Instructional Materials:			

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Clean metal surfaces

Code: CON - BM22

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods	
Introduced	Involved	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - wash selected metals with mild solution of detergent and warm water: - aluminum - stainless steel, chrome - iron. - clean selected metals with aerosol cleaner and wipe lightly with untreated dust cloth: - aluminum - stainless steel, chrome - unlacquered brass or bronze - copper. - wash copper surfaces with mild acid cleaner followed by mild detergent bath and dry with clean untreated dust cloth. - remove rust buildup on iron with kerosene or solvent on a .00 steel wool pad.	- Advanced student, resource person (from on job) or instructor demonstrates: - How to fold cloth - How to handle steel wool pads. - Students have "on-hands" practice on folding of cloths and handling steel wool pads.	
Productive				
Employable				
Task-Related Competencies			Instructional Materials	
Title			Media	
Bib.				
KNOWLEDGE				
A 7,9				
NUMBERS				
B 4c				
APPLICATION				
C 5,8				
PHYSICAL				
D 1a,d				
2b				
3c,f,g				

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BM22 **TASK:** Clean metal surfaces

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Dilution Lukewarm Scrub Rinse Wipe Soft cloth Maintain Cleaning Names of metals brass copper bronze aluminum nickel stainless steel	Figure ratios of 10 to 1 for cleaning solutions. Measure and add 12 oz to 1 gallon of water. Utilize units of liquid volume, i.e. ounces, pints, quarts.	- Assist student in improving judgment and decision making skills. - This task may be particularly appropriate for deaf student.
Supportive Instructional Materials:		

TASK: Perform dusting

Code: CON - BM23

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - top dust an area after selecting equipment and materials: - treated dust cloth - damp dust cloth - pails - wall brush - feather duster - whisk broom - port-a-vacs. - follow a prescribed procedure for dusting - bring equipment to area: - fold cloth into squares - begin at entrance - use horizontal and vertical strokes - start at top and dust down - inspect your work.	- The vocational instructor discusses and demonstrates: - How to fold dust cloth - How to handle dust cloth: vertical and horizontal - What and where to dust - Size of handle dusters - Types of surfaces to be dusted.
Involved		Instructional Materials
Productive		Title
Employable		Media
		Bib.

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON- BM23 TASK: Perform dusting

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Horizontal	Estimate 6' (feet).	• Perform up and down motion. • This task may be particularly appropriate for deaf student. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.
Vertical	Estimate 6" (inches).	
Side	Measure height of desk, chair.	
Handle duster	Measure length of desk.	
Feather duster	Measure width of chair.	
Rags		
Desk		
Filing cabinet		
Window sills		
Telephone		
Machine stands		
Ash tray		
Pictures		
Molding		
Baseboard		

Supportive Instructional Materials:

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Sheet 1 of 1

TASK: Store maintenance supplies and equipment

Code: CON - BM24

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods	
Introduced	Involved			
		Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - demonstrate the techniques for storing supplies and equipment for: - easy access - minimize damage or loss - easy inventory - easy checkout and recording of amount used - material handling safety. - care and upkeep of equipment: - keep equipment clean - report faulty equipment - properly hang equipment.	- Students work with building custodian, storing maintenance equipment and supplies. - Students review illustrated text materials. - Teacher encourages small peer group cooperation and interaction.	
		Task-Related Competencies	Instructional Materials	
			Title	Media Bib.
		KNOWLEDGE A 1,9	<u>Building Maintenance</u> <u>Janitor-Custodian</u>	13
		NUMBERS B 2b 4a, b, 5		13
		APPLICATION C 3,6,7		
		PHYSICAL D 1a, b, d 2b 3b, c, d, g, f		

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Code: CON - BM24 TASK: Store maintenance supplies and equipment

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Inventory	Relate inches and feet to space between shelves, size of bins, etc.	• This task may be particularly appropriate for deaf student.
Safety		• Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.
Supplies	Relate weights of containers and contents to pounds, ounces, etc.	• Stress the importance of organized storage for purposes of easy access and safety.
Equipment	Relate quantities of supplies to dozens, gross, etc.	
Bins	Written checkout records of supplies and materials.	
Storage	Computations for inventorying supplies and equipment.	
Materials		
Damage		
Loss		
Checkout		
Record		

Supportive Instructional Materials:

TASK: Schedule maintenance activities

Code: CON - BM25

Student Name: _____

Student Progress	Introduced	Involved	Productive	Employable	Behavioral Task Knowledges/Task Skills	Instructional Methods		
						Instructional Materials		
					Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - develop a daily maintenance sequence for the following areas: - lobby (cleaning/dusting) - public toilets (men's and women's) - passenger elevators - freight elevators - offices - corridors - stairwells - locker rooms - janitorial closets - sweeping - wet mopping - stripping - damp mopping. - develop a weekly maintenance sequence for the following areas: - lobby - public toilets - passenger elevators - offices - corridors - stairwells - locker rooms - janitorial closets - damp wiping - buffing - entrance glass - furniture vacuumed - waxing - dust molding.	- Teacher encourages small peer group cooperation and interaction. - Teacher matches successful students who are interested in helping those having difficulty.		
						Task-Related Competencies	Title	Media Bib.
						KNOWLEDGE A 8, 9 NUMBERS B 1, 2, 4a, c, d, 5, 6 APPLICATION C 1a, 4, 5, 6, 8 PHYSICAL D 1a, 2a		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BM25 **TASK:** Schedule maintenance activities

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Daily	Abbreviations for liquid measurements	• This task may be particularly appropriate for deaf student. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Assist student in improving judgment and decision-making skills. • Stress the importance of planned regular cleaning.	
Weekly			
Quarterly			
Monthly			
Annually			
Semi-annually			
Duties			
Corridor			
Cafeteria			
Light fixtures			
Interior			
Exterior			
Supplies			
Toilets			
Garbage			
Supportive Instructional Materials:			

SUBCLUSTER:

BUILDING MAINTENANCE/SERVICE

Sheet 2 of 2

TASK: Schedule maintenance activities

Code: CON - BM25

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 3. develop a monthly maintenance plan for the following areas: a. lobby b. janitorial closet c. corridors d. public toilets e. office f. stairwells g. locker rooms h. wash interior glass i. polish furniture j. damp wipe walls k. spot walls l. wash waste baskets m. dust venetian blinds. 4. develop a semi-annual or annual maintenance plan for lobby, public toilet, office, corridors, stairwell, locker room, and janitorial closet areas to include: a. ceilings b. light fixtures c. floors d. walls e. furniture thoroughly vacuumed f. strip, seal, wax all floors g. buff all floors.	KNOWLEDGE		
Involved		NUMBERS		
Productive		APPLICATION		
Employable		PHYSICAL		

SUBCLUSTER: BUILDING MAINTENANCE/SERVICE

Code: CON - BM25 TASK: Schedule maintenance activities

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Supportive Instructional Materials:		

RESIDENTIAL CONSTRUCTION

INSTRUCTIONAL TASK MODULES



- | | | | |
|------|---|------|--|
| RC01 | Handle and store building materials | RC27 | Assist in anchoring a roof frame |
| RC02 | Assist in laying out building lines | RC28 | Assemble and install roof trusses |
| RC03 | Assist in constructing forms for footings | RC29 | Attach roof sheathing |
| RC04 | Mix concrete and mortar | RC30 | Install asphalt roofing materials |
| RC05 | Lay blocks | RC31 | Assist in installing vapor barrier |
| RC06 | Set posts and columns | RC32 | Install batt and blanket insulation |
| RC07 | Assist in setting girders and beams | RC33 | Install reflective insulation |
| RC08 | Assist in constructing framing over girders and beams | RC34 | Install fill insulation |
| RC09 | Assist in installing sills | RC35 | Assist in installing rigid insulation |
| RC10 | Assist in installing floor joists | RC36 | Assist in applying or installing acoustical insulation materials |
| RC11 | Frame floor openings | RC37 | Recognize types and parts of windows |
| RC12 | Install bridging | RC38 | Assist in setting windows |
| RC13 | Attach subflooring | RC39 | Assist in installing door frames |
| RC14 | Assist in framing outside wall corner posts | RC40 | Install a garage door |
| RC15 | Assist in framing partition intersections | RC41 | Assist in constructing rake and cornice sections |
| RC16 | Follow a master stud layout | RC42 | Install horizontal siding |
| RC17 | Frame rough openings | RC43 | Install vertical siding |
| RC18 | Assemble a wall section | RC44 | Assist in installing siding systems |
| RC19 | Erect a wall section | RC45 | Install gutter systems |
| RC20 | Install partition sections | RC46 | Prepare a brick veneer finish |
| RC21 | Install bracing to exterior walls | RC47 | Recognize interior finishing operations |
| RC22 | Add double top plate | RC48 | Assist in applying ceiling tile |
| RC23 | Apply wall sheathing | RC49 | Hang interior doors |
| RC24 | Assist in assembling a ceiling frame | RC50 | Apply interior trim |
| RC25 | Cut and erect roof rafters | RC51 | Lay interior floors |
| RC26 | Frame-in roof openings | | |

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Handle and store building materials

Code: CON - RC01

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - select the appropriate material for covering and protecting materials: - canvas - waterproof paper - plastic. - use and install skids and spacers in stacking framing lumber and sheathing. - recognize and observe specific safety precautions in handling and stacking materials. - demonstrate the appropriate procedures for the following: - moving materials - stacking materials - unloading materials - protecting materials from exposure.			
Involved		KNOWLEDGE		
Productive		A 5,6,9	Modern Carpentry, p. 66	22
Employable		NUMBERS	"Lumber Handling and Piling"	4
		B 1,2	"Lumber for Houses"	17
		APPLICATION		
		C 5,7		
		PHYSICAL		
		D 1a,b,c,d,e 2d, 3		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC01 TASK: Handle and store building materials

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Stacking Level Covering plastic visqueen Skid Palette Spacing Location	Review various materials being used in the vocational class by using proper terms such as "two by four, sixteen feet long," (2x4x16) or a "four by eight sheet of half inch C-D plywood" (1/2" CD).	Discuss procedures used in stacking and/or organizing materials to emphasize safety, convenience, and minimizing damage.
Supportive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Assist in laying out building lines

Code: GON - RC02

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods	Instructional Materials		
			Task-Related Competencies	Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify and describe the basic purpose of laying out building lines. 2. assist in running a transit and leveling equipment. 3. erect batter boards. 4. suspend building lines from batter boards. 5. check squareness of building lines.	• Students layout a mock foundation on school grounds. • Students review illustrated text materials. • Students waterproof block wall of a scale model wall built in lab. • Para-professionals provide sustained involvement with students having difficulty with this task.	KNOWLEDGE	<u>Modern Carpentry</u>	13 22
Involved			A 3,6,7,9		
Productive			NUMBERS		
Employable			B 4a,i		
			APPLICATION		
			C 5,7		
			PHYSICAL		
			D 1a,b,d,e		
			2b		
			3-		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC02 TASK: Assist in laying out building lines

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Wooden stakes Corner stake Equal distance Width Length Center Heavy cord Chalk line Lot lines Building codes Brace Framing square Transit Diagonal Perpendicular	Find the center of a 2"x2" wooden stake by drawing diagonals on the end. Determine the squareness of a room or building by measuring and comparing the diagonals (corner to corner). Check the squareness of a room or building by use of the pythagorean theorem, relationship of 3 to 4 to 5. Three and four are the legs and five is the hypotenuse of a right triangle.	- Emphasize that an out-of-square foundation can result in materials not fitting on floors, walls, ceilings, roofs, etc. - This task can be easily simulated in a sandbox, on a tabletop, or chalkboard. - Drill deaf student extensively on language of the task. - Be careful in using words with multiple meanings when talking to lip reading deaf students. (anchor pin)

Supportive Instructional Materials:

Rough Carpentry & Masonry by Atkinson, McGraw-Hill, pg. 6-7

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Assist in constructing forms for footings

Code: CON - RC03

Sheet 1 of 1

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods
Introduced	Involved	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify different types (designs) of residential footings. 2. use a plumb bob to set corners of footing forms. 3. set building corners with stakes. 4. set-up form boards for outside and inside of footings. 5. level form boards. 6. set-up forms for column footings. 7. shovel excavate the area for setting the form.	• Students will be involved in setting up batter boards, stringing lines, excavating for footings, and setting up forms as a class activity. • Teacher provides demonstration of each activity using transparencies. • Student follows a teacher demonstration with "hands-on" supervision. • Para-professionals provide sustained involvement with students having difficulty with this task.
Productive	Employable		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC03 TASK: Assist in constructing forms for footings

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Plumb bob	Support	Easy to simulate this task by using styrofoam or similar material to represent the footings and a wall section. Be careful in using words with multiple meanings when talking to lip reading deaf students.
Intersection point	Main beam posts	
Foundation corner	Chimney	
Footing forms	Fireplace	
Batter board	Excavate	
Center of stake	Key	
Level	Concrete	
Carpenter's level	Slab	
Inside face		
Crosswise		
Deep		
Wedge		
Brace inner outer		
Banked		

Supportive Instructional Materials:

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
TASK: Mix concrete and mortar

Code: CON - RC04

Student Name: _____

Sheet 1 of 1

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
		Task-Related Competencies	Instructional Materials Title	Media	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify the ingredients of concrete: a. cement b. aggregate 1) fine (sand) 2) coarse (gravel or crushed stone) c. water. 2. describe the mix proportions of concrete: a. cement b. sand c. gravel d. water. 3. select and operate mixing tools and equipment: a. cement mixer b. ready-mix truck c. wheelbarrow d. hoe. 4. identify the ingredients for mortar. 5. describe the mixing proportions for mortar. 6. prepare high quality mortar and cement mixes by following prescribed procedures.	KNOWLEDGE			
Involved		A 1,3,9	Modern Carpentry, Unit 6	13	22
Productive		NUMBERS			
Employable		B 2b, 4b,c,5	"Pouring the Footing"	12	20
		APPLICATION	"Footing"	12	20
		C 5	"Foundations for Your Home"	10	53
		PHYSICAL			
		D 1a,d			
		2d			
		3-			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RCO4 TASK: Mix concrete and mortar

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Concrete	One (1) bag Portland cement weighs 87 1/2# equal to 1 cubic foot in volume.	Suggestions: - Stress the importance of wearing gloves to keep hands clean. Keep mortar and concrete off the skin. - Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.
Portland cement	Visualize one cubic yard: 1 yd. x 1 yd. x 1 yd.	
Water	Large aggregate more than 1/5 the thickness of wall are usable.	
Aggregate fine 1/4" screen coarse 1/3"-1 1/2" screen	Prepare mixes in a ratio 1:2:4 One part water to two parts cement to four parts sand	
Cement mixer	Perform a silt test: 1. Add 2" of sand to a quart jar. 2. Add water to 3/4 full. 3. Shake violently for minute or two. 4. Let stand one hour. 5. Measure silt layer at top of sand, if more than 1/8" thick, soil may not be suitable for a foundation.	
Mixing consistency		

Supportive Instructional Materials:

Modern Carpentry, Willis H. Wagner, Goodhart-Wilcox, pg. 91
 Rough Carpentry and Masonry, Atkinson, McGraw Hill, pg. 17

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
TASK: Lay blocks

Sheet 1 of 1

Code: CON - RC05

Student Name:

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Instructional Materials		
Introduced	Involved	Task-Related Competencies	Title	Media Bib.
	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify the different sizes and shapes of block: - stretcher (3 core) - corner - double corner or pier - bull nose - jamb - stretcher (2 core) - full cut header - partition (4"x6") - beam or lintel. - describe the typical block arrangements for corners, walls, and door/window openings. - perform the following job skills in laying block: - aligning a block wall with a string line - preparing mortar - placing mortar on block joints - leveling a block - finishing a mortar joint.	- Teacher or para-professional provides demonstration of block/brick laying techniques. Students demonstrate procedures under supervision. - Students review illustrated text materials. - Students prepare and build corners and stretcher courses in lab. - Teacher encourages small peer group cooperation and interaction. - Evaluate work with students on an individual basis.	Modern Carpentry, Unit 6 "Brick and Block Laying" (booklets) "Block Laying"	13 22 13 48 12 29
		KNOWLEDGE A 2,3,6,9 NUMBERS B 2b,4a,i,5 APPLICATION C 5 PHYSICAL D 1a,b,d,e 2d 3-		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC05 TASK: Lay blocks

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Trowel	Use of level	• Use plastic (toy) bricks or rectangular sugar cubes in simulating block laying. • Drill deaf student extensively on language of the task.
Mortar	Use of plumb	
Core	Square footage in wall with size of blocks	
Block 4" and 8" 12" and 16"	Given the length of the wall and size of block, determine the number of blocks needed for the first row (course). Then for a 12 course wall.	
Mortar board		
Cement mixer		
Sand		
Water		
Wheelbarrow		
Scaffold		
Vertical		
Horizontal		
Plumb		
Level		
Supportive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Set posts and columns

Code: CON - RC06

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify the different types of posts and columns: - built-up (wood post) - steel posts. - demonstrate the basic procedures for installing posts and columns: - fabricate built-up post by nailing together three 2x6's - locate/position an alignment pin for post in footing - position post or column on footing and over alignment pin - adjust threaded steel post for correct height.	KNOWLEDGE		
Involved		A 3, 6	Modern Carpentry	13 22
Productive		NUMBERS	Architectural Drafting and Design	13 34
Employable		B 4a APPLICATION	"Framing For Openings"	12 20
		PHYSICAL D 1a, 2b, 3a		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC06 TASK: Set posts and columns

Basic Information for Cooperative Teaching		
Language of the Task	Quantitative Concepts	Suggestions:
Footings Above/below Reinforcing Post anchor Bracket Built-up wood post Defects Buckle Adjustable Column Post	Determine the "adjustable size" of a post or column needed to support a beam 8' above a basement floor.	• Ask the construction teacher for a made-up or framing model. • Drill deaf student extensively on language of the task. • Be careful in using words with multiple meanings when talking to lip reading deaf students.
Supportive Instructional Materials:		

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Assist in setting girders and beams

Code: CON - KC07

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods																											
Introduced	Involved	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. describe the basic purpose of girders and beams. 2. identify and describe the different types of girder construction: a. built-up b. solid (beams). 3. demonstrate the following procedures for installing girders and beams over posts and columns: a. cut and assemble built-up beams b. set beams and girders on foundation and post/columns by crane or mass handling.	• Students assemble mock-ups of different types and sizes of beams for specified spans and loads. • Teacher provides demonstration of procedures for setting beams. • Students in small groups visit a job site to observe this operation. • Teacher encourages small peer group cooperation and inter-action. • Teacher matches successful students who are interested in helping those having difficulty with this task.																											
Productive	Employable																													
		<table><thead><tr><th colspan="3">Instructional Materials</th></tr><tr><th>Task-Related Competencies</th><th>Title</th><th>Media Bib.</th></tr></thead><tbody><tr><td>KNOWLEDGE</td><td rowspan="5">Modern Carpentry</td><td rowspan="5">13 22</td></tr><tr><td>A 6, 9</td></tr><tr><td>NUMBERS</td></tr><tr><td>B 4a, i</td></tr><tr><td>APPLICATION</td></tr><tr><td>C 5</td><td></td><td></td></tr><tr><td>PHYSICAL</td><td></td><td></td></tr><tr><td>D 1a, d</td><td></td><td></td></tr><tr><td>2e</td><td></td><td></td></tr><tr><td>3c</td><td></td><td></td></tr></tbody></table>	Instructional Materials			Task-Related Competencies	Title	Media Bib.	KNOWLEDGE	Modern Carpentry	13 22	A 6, 9	NUMBERS	B 4a, i	APPLICATION	C 5			PHYSICAL			D 1a, d			2e			3c		
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C 5																														
PHYSICAL																														
D 1a, d																														
2e																														
3c																														

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC07 TASK: Assist in setting girders and beams

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Joists Span Girders Foundation Flanges	Determine the load per square foot on given floors, i.e. attic, bathroom, living room from a load table. Girder and beam sizes are determined by 1. dead load and live load weights 2. distance between posts and columns	• Discuss the composition of different girders. • Practice reading various tables used in selecting beams and girders. • Wood and steel beams vary in characteristics: 1. wood-width, depth, species, grade 2. steel-weight, depth, thickness of web and flanges • Be careful in using words with multiple meanings when talking to lip reading deaf students. (I-beam) • Drill deaf student extensively on language of the task.
Supportive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Assist in constructing framing over girders and beams

Code: CON- RC08

Sheet 1 of 1

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify the framing components: - hangers - solid bridging - I-beam plate. - describe and demonstrate the different methods for framing over a girder or beam: - notching joists and using a ledger strip - overlapping joists on top of beam and placing solid bridging between - using a joist and beam hanger.	KNOWLEDGE A 1,6,7,9 NUMBERS B 2a,b,4a,i APPLICATION C 5,8 PHYSICAL D 1a,b,d,e 2d 3-	- Students view filmstrip and illustrated text materials. - Students simulate procedures for constructing framing over girders and beams on a scale model house section (1" = 1'0") - Teacher encourages small peer group cooperation and interaction. - Para-professionals provide sustained involvement with students having difficulty with this task.	
Involved			<u>Modern Carpentry</u> <u>"Building the Frame of a House"</u> <u>Dwelling House Construction</u>	13 22 10 18 13 56
Productive				
Employable				

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC08 TASK: Assist in constructing framing over girders and beams

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Joists Foundation wall Wood pad Sill Headroom Notched Ledger Flush/level Hangers/stirrups Shrink Sloping H beam I beam	Illustrate the concept of flush and level using scrap building materials or a scale model.	Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
Supportive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
 TASK: Assist in installing sills
 Code: CON - RC09

Sheet 1 of 1

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
		Task-Related Competencies	Instructional Materials Title	Media	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify common sill material sizes. 2. describe the basic purpose of the sill. 3. perform the following job skills: a. install anchor bolts in foundation wall, with size and spacings specified from building code b. drill holes in sill for anchor bolts c. apply sill sealer or mortar to top of foundation d. place sill plate in position e. level sill by tapping f. bolt sill in place.	KNOWLEDGE A 1,3,6,7,9 NUMBERS B 4a,i, 5 APPLICATION C 5 PHYSICAL D 1a,d,e 2d 3-	<u>Modern Carpentry</u>	13	22
Involved					
Productive					
Employable					
		• Teacher provides a demonstration in the construction laboratory. • Students simulate procedures on scale model house section (1" = 1'0"). • Students review illustrated text materials. • Teacher encourages small peer group cooperation and inter-action.			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC09 TASK: Assist in installing sills

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Sill plate - mud sill Grout Mortar Resilient Waterproof Sill seal	Determine the number of rolls of sill sealer needed to seal 250' of sill if the rolls come in 50' lengths.	• Sills vary in size depending on type of construction. • Discuss sections of local building codes dealing with sills. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.	
Supportive Instructional Materials:			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Assist in installing floor joists

Code: CON - RC10

Sheet 1 of 1

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods				
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify the common on-center spacing of floor joists: a. 16" o.c. b. 12" o.c. c. 20" o.c. d. 24" o.c. 2. perform the following job skills: a. place header joists in position and toenail them to sill b. place full length joists in position c. attach joists to header at layout marks with 20d nails d. repeat process along opposite wall e. nail joists together at beam or girder with 10d nails f. nail doubled joists together.	Task-Related Competencies	Instructional Materials		Media	Bib.
Involved			Title			
Productive			Modern Carpentry			
Employable						
		KNOWLEDGE			13	22
		A 1,3,6,7				
		NUMBERS				
		B 2a,4a,i				
		APPLICATION				
		C 5,8				
		PHYSICAL				
		D 1a,e				
		2d,e				
		3a,b,c,d,e,f,8				

Code: CON - RC10 SUBCLUSTER: RESIDENTIAL CONSTRUCTION
TASK: Assist in installing floor joists

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Placed on edge	16 in. on center (oc)	• Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). • Be familiar with the Uniform Building Code for nail spacing.	
Steel bar joists	Determine the number of floor joists needed in a 12' floor if the joists are placed:		
Live loads	12 o.c.?		
Vibration	16 o.c.?		
Deflection	24 o.c.?		
Joist header	Relate various nail sizes (lengths) with penny sizes (d).		
Master layout			
On center			
Lapped			
Underneath			
Trimmers			
Trimmer joists			
Tail joists			
Doubled joists			
Toenail			
Supportive Instructional Materials:			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Frame floor openings

Code: CON - RCL1

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify the floor frame opening members: - tail hoists - headers - trimmers. - perform the following job skills: - place boards or plywood on decking to provide work surface - cut and set the trimmer joists in place - determine length of headers - cut headers and tail joists to length - layout position of tail joists from main header - install headers - install tail joists - nail the double header in place with 20d nails - nail the double trimmer in place - stagger nails on a diagonal to increase strength of fastening - attach headers, trimmers, and tail joists with metal framing anchors.	- Students simulate floor framing procedures on a scale model house section (1" = 1'0"). - Class visits a job site to observe and/or participate in framing of floor openings. - Teacher encourages small peer group cooperation and interaction. - Teacher matches successful students who are interested in helping those having difficulty. - Students review illustrated text materials.	Modern Carpentry	13 22
Involved		KNOWLEDGE A 1,3,6,7		
Productive		NUMBERS B 2b,4a,i		
Employable		APPLICATION C 5,8		
		PHYSICAL D 1a,e 2d,e 3		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC11 TASK: Frame floor openings

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Working deck Header Tail joists First trimmer, second trimmer Plywood Tongue and groove plywood Adhesive Joists	General procedure: cut to length-square and true Compare nail sizes by length and penny (d) designations.	• Make mock-up version. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual).	
Supportive Instructional Materials:			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Install bridging

Code: CON - RC12

Student Name: _____

Student Progress				Instructional Methods	Task-Related Competencies	Instructional Materials	
Introduced	Involved	Productive	Employable			Title	Media Bib.
Behavioral Task Knowledges/Task Skills Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - determine the standard location/spacing of cross bridging. - identify the common types of bridging: - solid - regular (cross). - describe the basic purpose of bridging. - perform the following job skills in installing cross bridging: - Layout master piece with framing square. - locate position of run and mark with chalkline. - cut bridging pieces from master. - start two 8d nails in each end of bridging. - attach a piece to each side of every joist - do not nail lower ends of bridging until subfloor is attached. - perform the following job skills for installing solid bridging: - cut solid bridging piece from joist-size material. - install full piece between joists on top of beam or girder. - identify the types of cross-bridging materials: 1"x3" wood, prefabricated steel bridging.				- Class visits job site to observe the installation of bridging. - Students simulate procedures on scale model house section (1" = 1'0"). - Para-professionals provide sustained involvement with students having difficulty with this task. - Students review illustrated text materials.		Modern Carpentry	13 22

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC12 TASK: Install bridging

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Joists	Determine the length of bridging if the joists are 2"x10" boards, spaced 16" apart on center.		
Cross-bridging	Measure the angle for cutting bridging.		
Prefabricated	Determine the cutting procedure for getting the maximum amount of pieces of bridging out of a 1"x3"x12'.		
Chalk line	Discuss nail sizes most appropriate for attaching bridging (8d).		
Subfloor			

• Students identify joists, girders, cross-bridging from pictorial drawing. • Term sheet used to identify the written words: joists, girder, etc. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
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Supportive Instructional Materials:

Pictorial drawing
Term sheet
1 x 3 model

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Attach subflooring

Code: CON - RCL3

Sheet 1 of 1

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
		Task-Related Competencies	Instructional Materials	Media	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify different types of sub-flooring materials: a. plywood b. shiplap c. tongue and groove d. common boards e. fiberboard. 2. describe the basic purpose of sub-flooring: a. add rigidity to structure. b. provide a base for application of finished materials. 3. perform the following job skills for installing shiplap or common board flooring: a. lay at a 45° angle with joists. b. start at a distance from corner and lay back to corner. c. let ends hang out over openings and walls and cut off later with saw. d. use two 8d nails in each board to joist. e. lay without cracks between boards. 4. perform the following job skills for installing plywood subflooring: a. use 1/2" or 5/8" plywood laid perpendicular to joists. b. use 8d nails six inches apart, along edges and ten inches apart on intermediate members.	• Students copy outline of a first floor from a blueprint and draw in the placement of 4'x8' sheets of subflooring. • Students simulate procedures on scale model house section (1" = 1'0"). • Class visits job site to observe laying of subflooring. • Students review illustrated text materials. • Teacher matches successful students who are interested in helping those having difficulty.	Modern Carpentry	13	22
Involved		KNOWLEDGE A 6,7,9 NUMBERS B 2b,4a,i APPLICATION C 5 PHYSICAL D 1a,d,e 2d 3a,c,e,f,g			
Productive					
Employable					

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RCL3 TASK: Attach subflooring

Basic Information for Cooperative Teaching		Suggestions:								
Language of the Task	Quantitative Concepts									
On center Partical board Fiberboard Shiplap Common boards Tongue and groove	Determine the number of square feet in a sheet of plywood (4'x8'). Determine the number of sheets of plywood needed to cover an area of 24'x48'. Discuss nail size and nail types which may be appropriate, i.e. 8d ring nail.	• Collect samples of types of subfloor materials from vocational instructor. • Consult local supplier for relative costs per square foot for discussion. • On study sheet line is drawn down center; have student write question: What is purpose of subflooring? Write answer on right side as a personal study tool and continuous study sheet of concepts and knowledge requisites. <table><thead><tr><th>Questions</th><th>Answers</th></tr></thead><tbody><tr><td>What is purpose of subflooring?</td><td>to make house strong & flat. so rest of house can be built on top of it.</td></tr><tr><td>rigidity (what does word mean?)</td><td>straight, not bumpy, firm</td></tr><tr><td>finished materials</td><td>what the house is built of</td></tr></tbody></table>	Questions	Answers	What is purpose of subflooring?	to make house strong & flat. so rest of house can be built on top of it.	rigidity (what does word mean?)	straight, not bumpy, firm	finished materials	what the house is built of
Questions	Answers									
What is purpose of subflooring?	to make house strong & flat. so rest of house can be built on top of it.									
rigidity (what does word mean?)	straight, not bumpy, firm									
finished materials	what the house is built of									
Supportive Instructional Materials:										
Paper Pencil Samples of floor materials										

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Assist in framing outside wall corner

Code: CON - RC14

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name corner framing components. 2. describe corner framing methods: a. three full studs and blocking or spaces. b. three full studs and no blocking. 3. perform the following job skills for constructing corners: a. frame complete end and side wall. b. nail three or four spacer blocks to end stud in side wall. c. nail full stud to spacer block. d. raise and assemble side and end walls forming corner. e. nail through end stud of end wall with 10d nails spaced 12" apart.	• Teacher develops an activity/quiz worksheet on identification of wall frame members. • Students construct different wall corner frame models (full size) in the construction lab. • Teacher makes contact with <u>each</u> student during the class period. • Teacher matches successful students who are interested in helping those having difficulty. • Students review illustrated text and transparency materials.	<u>Modern Carpentry</u> "Wall Framing"	13 22 12 29
Involved		KNOWLEDGE		
Productive		A 1,6,7,9		
Employable		NUMBERS		
		B 2b,4a,i,5		
		APPLICATION		
		C 5,8		
		PHYSICAL		
		D 1a,d,e		
		2d,e		
		3a,b,c,e,f		
		g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RCL4 TASK: Assist in framing outside wall corner

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Corner framing Studs Blocking Spacer blocks	Measure and layout framing materials for cutting (see Construction teacher for common lengths and sizes). Discuss "16 inch on center concept" as it applies to spacing the framing members. Discuss the concept of square and plumb.	• Label pictures or models of studs, spacer blocks, plates, and have student match with pictures. • Attend class activity to work with vocational teacher at initial presentation, having students match words with activities and materials. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.	
Supportive Instructional Materials:			
Labels, models, building materials from vocational instructor			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Assist in framing partition intersections

Code: CON - RC15

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name partition frame members. 2. describe specific partition intersection framing methods: a. extra studs in outside wall. b. using blocking and backing between regular studs in outside wall. 3. perform the following job skills for framing partition intersections: a. determine intersection point on exterior wall. b. set extra studs in outside wall at intersection, or bridge between studs at intersection point with blocking or backing material. c. raise partition into position. d. nail through partition end stud into wall stud or backing.	KNOWLEDGE A 1,6,7,9 NUMBERS B 2b,4a,i,5 APPLICATION C 5,8 PHYSICAL D 1a,d,e 2d,e 3a,b,c,e, f,g	Modern Carpentry	13 22
Involved				
Productive				
Employable				

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RCL5 TASK: Assist in framing partition intersections

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Partition Frame Members Framing Intersection Partition intersection Solid anchorage	Discuss the concept of plumb and square. Compare and identify 8d, 16d, 20d, nails.	- Refer to pictures or blueprints showing how partitions and outside walls connect. - Collect framing lumber samples and various nail samples from the vocational instructor.
Supportive Instructional Materials:		
Framing lumber samples from vocational instructor		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Follow a master stud layout

Code: CON - RC16

Sheet 1 of 1

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify the basic master stud layout information: - floor levels. - ceiling heights. - window/door heights. - thickness of specific materials. - describe the basic purpose of using the master stud layout. - demonstrate the basic procedure for using a master stud layout: - layout distance from the rough floor to the ceiling. - draw the position of the sole plate and double top plate. - layout position and size of header. - layout heights of rough openings and sills. - length of various studs can be taken directly from this master layout.	- Students build and prepare a simple master stud and demonstrate its use on a model (1' = 1'0"). - Teacher and/or resource person discusses the use and importance of a master stud layout. - Students review illustrated text materials. - Teacher matches successful students who are interested in helping those having difficulty.	Title Media Bib.	
Involved		KNOWLEDGE	Modern Carpentry	22
Productive		A 1,2,3,7,9 NUMBERS		13
Employable		B 4a,5,6 APPLICATION C 2,3,7 PHYSICAL D 1a-e 2c 3a,b,c,f,8		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
 Code: CON - RC16 TASK: Follow a master stud layout

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Master stud Layout distance Sole plate Double top plate	Practice measuring distances of 30' to 80' to 1/4" accuracy. This may be done outside when weather permits or inside in a gymnasium, cafeteria, or other large room. Discuss dimension lumber sizes, i.e. 2x4 actually measures 1 1/2" x 3 1/2", etc.	• In class setting (building trades), have students show you what a: 1. master stud is. 2. describe a layout distance, sole plate, double top plate. • Have students draw a master stud or tell how it is used. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
Supportive Instructional Materials: Model Scrap 2x4's, 2x6's, 2x10's, 2x12's for measurement purposes		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Frame rough openings

Code: CON - RC17

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify rough opening framing members: - header - trimmer stud - rough sill - cripple stud. - perform the following job skills in framing rough openings: - cut openings in completed wall. - nail in trimmers. - position and nail in header. - position and nail in sill. - cut and nail in cripples. - perform the following job skills for header construction: - determine rough opening and header length. - determine size of header required from table. - assemble header by placing two members on edge and nailing together with a plywood spacer.	- Students simulate framing of rough wall openings on a scale model house section (1' = 1'0"). - Class visits job site to view the framing of rough openings. - Students follow a teacher demonstration with "hands-on" supervision. - Teacher makes contact with <u>each</u> student during the class period. - Students review illustrated text materials.	Modern Carpentry	13 22
Involved		KNOWLEDGE A 1.6,7,9		
Productive		NUMBERS B 2b,4a,i,5		
Employable		APPLICATION C 5,8 PHYSICAL D 1a,d,e 2d,e 3a,b,c,e, f,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC17 TASK: Frame rough openings

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Header Trimmer Rough sill Cripple stud Sill	Identify nail sizes by length in inches or penny sizes used in framing. Become familiar with actual framing lumber sizes which are called two by fours, two by tens, two by twelves, etc.	• Collect framing lumber sample pieces for practice measuring and identification. • Define each term in words he can remember as an oral expression. • Teacher makes contact with <u>each</u> student during the class period.	
Supportive Instructional Materials:			
Book Pencil, paper Collect samples of framing lumber and appropriate framing nails from vocational education instructor.			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
 TASK: Assemble a wall section
 Code: CON - RC18

Sheet 1 of 1

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods			
Introduced	Involved		Productive	Employable		
		Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name the component framing members of a wall section. 2. demonstrate the basic procedure for assembling a wall section: a. cut the various stud lengths from master stud layout. b. cut and assemble headers and sills from plate layout. c. place full length studs in position between plates. d. nail top and bottom plates to studs with two 16d nails. e. set trimmer studs and nail them to full length studs. f. position and nail in headers. g. install upper cripples. h. erect wall section and nail in position. i. install sills and nail in lower cripples. j. add studs or blocking at inter-section points. k. nail wall sheathing in place.	• Para-professionals provide sustained involvement with students having difficulty with this task. • Students simulate procedures on a scale model house section (1" = 1'0"). • Teacher matches successful students who are interested in helping those having difficulty. • Students review illustrated text materials.			
			Task-Related Competencies	Instructional Materials		
				Title	Media	Bib.
			KNOWLEDGE A 1,3,7,9 NUMBERS B 4a, 5 APPLICATION C 5,7 PHYSICAL D 1a,b,e 2c 3a,b	Modern Carpentry	13	22

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC18 TASK: Assemble a wall section

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Stud Master stud layout Headers Sills Plate Trimmer studs Cripples Wall sheathing 16d nails	Discuss the "16 in on center" concept which refers to spacing framing members 16" apart as measured by the center of the board. Become familiar with 20d, 16d, 8d, common nails.	• Handle and discuss actual materials in building trades room. • Have student print labels for each component. • Students remove label and identify each component orally. • Have student show or tell each component using the correct name for each member. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
Supportive Instructional Materials: Lumber, nails, other above mentioned materials under language of the task Labels		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Erect a wall section

Code. CON - RC19

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Instructional Materials		
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name the basic framing components of a wall section. 2. perform the following job skills in erecting a wall section: a. move into proper location. b. be sure that bracing is close at hand. c. be sure that sufficient help is available for lifting. d. install a diagonal brace to those sections without sheathing. e. raise the wall section to a vertical position and brace. f. adjust the position of the section and nail through sole plate and subfloor into floor joist. g. remove braces and plumb corners and mid-point of wall.	• Students simulate procedures for erecting a wall section on a scale model house section (1" = 1'0"). • Teacher develops activity/quiz worksheet on identification of wall framing members. • Teacher matches successful students who are interested in helping those having difficulty. • Para-professionals provide sustained involvement with students having difficulty with this task.		
Involved		Task-Related Competencies		
Productive		KNOWLEDGE		
Employable		A 3 NUMBERS B 4a,i APPLICATION C 5 PHYSICAL D 1a,d,e 2e 3a,c,f,g		
		Title		
		Modern Carpentry		
		Media		
		13		
		Bib.		
		22		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Erect a wall section

Code: CON - RC19 TASK:

Basic Information for Cooperative Teaching		
Language of the Task	Quantitative Concepts	Suggestions:
Bracing	Discuss the concepts of plumb, flush, square, and level.	• Have students draw lines diagonal vertical (plumb) square, using a guide. • Use plumb bob or a weight at the end of a string to demonstrate that plumb means vertical straight line. • Use table as model to show table top is square, table legs are plumb. • Use level to demonstrate plumb principle. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.
Diagonal		
Sheathing		
Sole plate		
Floor joist		
Braces		
Plumb		
Vertical		
Rough opening		

Supportive Instructional Materials:

Plumb pop
Level
Table
Square

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Install partition sections

Code: CON- RC20

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify by name the component framing members of a partition frame. - demonstrate the basic procedures for assembling and installing partitions: - assemble and erect long partitions first. - frame small alcoves, wardrobes, and closet partitions with 2x2 lumber. - frame openings for heating and plumbing.	- Students follow a teacher demonstration with "hands-on" supervision. - Students simulate procedures for installing partition sections on a scale model house section (1" = 1'0"). - Class visits job site to observe installation of partition sections. - Students review illustrated text materials. - Teacher concentrates his effort with students having difficulty.	Modern Carpentry	13 22
Involved		KNOWLEDGE A 1,3		
Productive		NUMBERS B 4a-i, 5		
Employable		APPLICATION C 5,7 PHYSICAL D 1a,b 2c 3a,b,c,f,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC20 TASK: Install partition sections

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Alcoves Wardrobes Partitions	Review exact sizes of framing lumber, i.e. two by two measures 1 1/2" x 1 1/2", two by four measures 1 1/2" x 3 1/2".	• Discuss with the vocational instructor some practical concepts to be reinforced. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Teacher and deaf student should cooperatively develop some simple signs related to language of the tasks.

Supportive Instructional Materials:

Samples of framing material

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Install bracing to exterior walls

Code: CON - RC21

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods																								
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. describe the basic purpose of bracing exterior walls. 2. identify the common sizes of bracing materials. 3. demonstrate the procedures/techniques for installing bracing: a. install let-in corner bracing by running 1 x 4 diagonally across frame. b. install short pieces of 2 x 4 block to base of corner sections.	• Students simulate procedures on scale model house corner section. • Students organize a visit to a job site to observe bracing of exterior walls and other related operations. • Teacher develops an activity/quiz worksheet illustrating methods of applying bracing. • Students review illustrated text materials. • Para-professionals provide sustained involvement with students having difficulty with this task.																								
Involved																										
Productive																										
Employable																										
		<table><thead><tr><th colspan="2">Instructional Materials</th></tr><tr><th>Task-Related Competencies</th><th>Title</th></tr></thead><tbody><tr><td>KNOWLEDGE</td><td></td></tr><tr><td>A 3</td><td></td></tr><tr><td>NUMBERS</td><td></td></tr><tr><td>B 4a,i</td><td></td></tr><tr><td>APPLICATION</td><td></td></tr><tr><td>C 5</td><td></td></tr><tr><td>PHYSICAL</td><td></td></tr><tr><td>D 1a,d</td><td></td></tr><tr><td>2a</td><td></td></tr><tr><td>3c,f,g</td><td></td></tr></tbody></table>	Instructional Materials		Task-Related Competencies	Title	KNOWLEDGE		A 3		NUMBERS		B 4a,i		APPLICATION		C 5		PHYSICAL		D 1a,d		2a		3c,f,g	
Instructional Materials																										
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A 3																										
NUMBERS																										
B 4a,i																										
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Media	Bib.																									
13	22																									

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC21 TASK: Install bracing to exterior walls

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Exterior walls Lateral stresses Blocking Bracing stock	Discuss angles, widths, and depths of cuts for bracing. Describe the strength feature of a diagonal brace.	• Illustrate the bracing concepts using fingers. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Drill deaf student extensively on language of the task.	
Supportive Instructional Materials: Collect framing material to use for identification, i.e. 2x4, 2x6, 2x10, 2x12.			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Add double top plate

Code: CON - RC22

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - describe the basic purpose of double top plate. - identify the different types of fastening materials. - demonstrate the procedures/techniques for installing double top plate: - select long straight lumber. - attach to top of plate with 16d nails. - locate joints in top piece at least four feet from joints in bottom piece. - overlap at corners and intersections.	- Students simulate procedures for adding a double top plate on a scale model house corner section (1" = 1'0"). - Teacher encourages small peer group cooperation and interaction. - Teacher matches successful students who are interested in helping those having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task. - Students review illustrated portions of the text.	Modern Carpentry	13 22
Involved		KNOWLEDGE		
Productive		NUMBERS		
Employable		B 4a,i, 5 APPLICATION C 5 PHYSICAL D 1a,d,e 2b 3a,b,c		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC22 TASK: Add double top plate

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Joist Rafters Lower top plate Lapped	Discuss the "16 on center" concept. Ask vocational instructor for illustrations. Sort a box of random sized nails and describe each different size with the proper penny (d) designation. Become proficient in estimating 16' in length because 16' 2x4's are used for top plate material. Be able to differentiate between 16', 14', 12', 10', and 8' in length.	• Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
Supportive Instructional Materials: Obtain a box of random sized nails from the vocational education instructor.		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Apply wall sheathing

Code: CON - RC23

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Title	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify different types of wall sheathing materials: - plywood - fiberboard - gypsum - wood boards. - describe the basic purpose of wall sheathing: - cover structure - provide lateral strength to structure - provide nailing base for exterior finish materials. - list the standard thicknesses of specific wall sheathing material. - fiberboard - plywood - wood boards. - demonstrate the appropriate procedures/techniques for installing wall sheathing: - apply sheats horizontally or vertically. - nail with 6d nails 6" on center. - select and use the appropriate fasteners for attaching wall sheathing materials: - plywood (6d nails) - fiberboard (1 3/4" nails) - gypsum (1 1/2" roof)	KNOWLEDGE A 1	Modern Carpentry	13 22
Involved		NUMBERS B 2b, 4a, i, 5	"Sheathing"	13 6
Productive		APPLICATION C 5	"Sheathing"	13 26
Employable		PHYSICAL D 1a, d, e 2c 3a, b, c, f, g	"Sheathing"	13 31

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC23 TASK: Apply wall sheathing

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Rigidity Lateral strength Diagonal bracing Wood fibers Tongue and groove Fiberboard Gypsum sheathing Horizontally/vertically On-centers	Recognize 4'x8' sheets. Distinguish between 1/2 and 3/4" thickness which is standard thickness of fiberboard sheathing. Select and/or sort 1 1/2" roofing nails for 1/2" sheathing or 1 3/4" roofing nails for (3/4) 25/32" sheathing. Discuss the concept of flush.	• Distribute, discuss, and identify samples of sheathing and nails. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
Supportive Instructional Materials: Collect samples of 1/2" and 3/4" (25/32") sheathing for identification purposes. Also samples of 1 1/2" and 1 3/4" roofing nails.		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 11 of 11

TASK: Assist in assembling a ceiling frame

Code: CON - RC24

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Instructional Materials		
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify and locate the ceiling framing members: a. joists b. ledger c. blocking d. nailer. 2. identify the following procedures/techniques for assembling a ceiling frame: a. cutting and installing on ledger. b. installing joist hangers. c. cut outer end of joists to match slope of roof. d. toenail joists to top plate with four 10d nails. e. fasten a nailing strip to top plate to carry parallel ceiling joists.	Task-Related Competencies	Title	Media Bib.
Involved		KNOWLEDGE	Modern Carpentry	13 22
Productive		A 1,3,9	"Ceiling Frame"	12 29
Employable		NUMBERS		
		B 4a,5		
		APPLICATION		
		C 5,7		
		PHYSICAL		
		D 1a,b		
		2c		
		3a,b,c,f,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: QON - RC24 TASK: Assist in assembling a ceiling frame

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Assembly Length of span Ceiling finish plaster dry wall Narrow dimensions Beam Flush Ledger Joist hangers Rafters Sub joists Double plate Nailing strips Access hole-scuttle hole	Discuss the concepts of: square - header to joist parallel - joist to joist on center - distance between the center of one joist to the center of the next joist Recognize nail sizes including: 10d (penny) nails 16d (penny) common nails		
Supportive Instructional Materials:			

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Cut and erect roof rafters

Code: CON - RC25

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods			
Introduced	Involved					
Productive	Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify the different types of roof rafters: - common - hip - valley - jack. - select straight and true pieces of lumber for rafters. - operate power and hand saws to cut rafters to predetermined and marked sizes. - select the appropriate nails (types/sizes) for nailing specific rafters. - follow a prescribed sequence for erecting, leveling, and adjusting roof rafters.	- Students practice cutting different types of rafters for specific given applications. - Students view film loops and illustrated text materials. - Students simulate rafter setting on scale model of house corner section (1" = 1'0"). - Teacher encourages small peer group cooperation and inter-action.	Instructional Materials		
			Task-Related Competencies	Title	Media	Bib.
			KNOWLEDGE			
			A 1,7,9	<u>Modern Carpentry</u>	13	22
			NUMBERS			
			B 4a,e			
			APPLICATION	"Laying Out and Cutting Common Rafters"	5	36
			C 5,7,8	"Rafter Construction"	12	20
			PHYSICAL			
			D 1a,b,e			
			2c			
			3a,b			

Code: CON - RC25 SUBCLUSTER: RESIDENTIAL CONSTRUCTION TASK: Cut and erect roof rafters

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Framing square 16 oz or 20 oz hammer 16d(penny) and 10d(penny) nails Adjustable T-bevel Rise (vertical and horizontal) Roof pitch Ridge Bird's mouth Overhang Plate Pattern rafter Pattern layout Ceiling joist Ridge boards Temporary bracing	Recognize 16d and 8d nails. Describe roof pitch in inches of rise and inches of run, i.e. a 4-12 roof pitch has a rise of 4 and a run of 12. A 12-12 roof pitch has a rise of 12 and a run of 12 or a 45° angle roof.	- Learn to read a table listing rafter sizes for various loads and spacings. - Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. - Teacher and deaf student should cooperatively develop some simple signs related to language of the task. - Ask the vocational instructor for a rafter pattern illustration to use in discussing the parts of a rafter. - Handle, identify, and discuss short pieces of 2x4's, 2x6's, 2x8's, 2x10's.

Supportive Instructional Materials:
Collect short samples of 2x4's, 2x6's, 2x8's, 2x10's.

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Frame-in roof openings

Code: CON - RC26

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - describe the different types of roof openings: - chimneys - skylights. - demonstrate the basic procedure for framing a roof opening: - nail temporary strip across top of rafter to be cut and two on each side of opening. - cut rafters and nail headers in place. - double the headers and trimmers if opening is large.	KNOWLEDGE A 1,3,7	<u>Modern Carpentry</u>	13 22
Involved		NUMBERS B 4a,i, 5		
Productive		APPLICATION C 5,7		
Employable		PHYSICAL D 1a,b,e 2c 3a,b,c,f,g		
		- Students simulate roof opening framing on scale model of house corner section (1" = 1'0"). - Teacher encourages small peer group cooperation and interaction. - Students review illustrated text materials.		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Frame-in roof openings

Code: CON - RC26 TASK:

Basic Information for Cooperative Teaching		
Language of the Task	Quantitative Concepts	Suggestions:
Chimney Sky lights Plumb line Headers Trimmer rafter	Recognize 16d and 10d nails. Measure on sample pieces of wood a series of 1) full inch measurements 8" long, 10" long, etc. 2) inches and fractions measurements 8 1/2" long, 9 3/4" long, 10 7/8" long.	
		- Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). - Pairs of students can work together in 1) listing a variety of measuring problem distances, i.e., 4 1/2", 5 3/4", 6 7/8", 8 3/8", etc. and then 2) marking boards to represent the listed measurements.

Supportive Instructional Materials:
Collect samples of framing lumber.

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Assist in anchoring a roof frame

Code: CON - RC27

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - Identify different anchor components and the application of each. - demonstrate the basic procedures/techniques for anchoring a roof frame by: - installing framing anchors to plate and rafters. - anchoring roof rafters to ceiling joists. - anchoring end walls with stub joists and metal straps.	- Teacher develops activity/quiz worksheet on identification of different types of roof anchors. - Teacher and/or resource person provides demonstration on anchoring a roof frame. - Students review illustrated text materials. - Teacher concentrates his effort with students having difficulty with this task. - Para-professionals provide sustained involvement with students having difficulty with this task.	Media Bib.	13 22
Involved		KNOWLEDGE	Modern Carpentry	
Productive		A 6,9		
Employable		NUMBERS		
		B 2b, 4a		
		APPLICATION		
		C 5		
		PHYSICAL		
		D 1a,d,e		
		2a		
		3a,b,c-		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RCZ7 TASK: Assist in anchoring a roof frame

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Outward thrust	Parallel	• Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Students review and label parts of a roof frame on an illustration.	
Plate	Alternate thirds		
Hip roof	Boards 1'x6'		
Cellar beams			
Ridge			
Stub ceiling joists			
Metal straps			

Supportive Instructional Materials:

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Assemble and install roof trusses

Code: CON- RC28

Student Name: _____

Student Progress	Introduced	Involved	Productive	Employable	Behavioral Task Knowledges/Task Skills	Instructional Methods		
						Task-Related Competencies	Instructional Materials Title	Media Bib.
					Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - Identify the common truss framing members: - bottom chord - top chord - tension web - compression web plate - span - gusset (connector). - Describe the advantages of using roof trusses. - Demonstrate the basic procedure for and assembling a truss: - pre-cut members to specifications. - clamp members together. - attach connectors for joints: - truss plates - truss connector - split ring connector - bolt and washer. - flip truss over and attach joint connectors to opposite side. - check dimensions carefully and nail it to floor for use as a pattern. - assemble remaining trusses. - raise completed trusses to roof and anchor in position.	- Students assemble scaled pre-cut truss materials following an instructor-prepared print. - Small groups of students assemble different types of truss models - test and evaluate strength and construction of each type. - Students review illustrated text and manufacturer's materials. - Teacher encourages small peer group cooperation and inter-action.	Modern Carpentry Truss Design	13 22 13 43

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC28 TASK: Assemble and install roof trusses

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Truss	Camber	24 inch on center, 16 inch on center	- Practice estimating camber for truss measurements. - Be careful in using words with multiple meanings when talking to lip reading deaf students. - Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. - Visit a building site during roof truss erection.
Triangular	Joint slip-page	Midpoint of span, i.e. 24' truss, 1/2" camber	
Rigidity	Nailing patterns		
Stresses	Plywood gussets		
Exterior	Full-size layout		
Interior	Align		
Span	Web members		
Width	Prefabricated		
W or Fink truss	Ring connectors		
Run	warped		
Rise	Load bearing partitions		
Gussets	Special jig table		
Bottom chord			
Fabrication			

Supportive Instructional Materials:

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Attach roof sheathing

Code: CON - RC29

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - Identify different types of roof sheathing materials: - plywood - shiplap - common boards. - demonstrate basic procedures/techniques for attaching roof sheathing materials: - erect scaffold for holding sheets. - nail sheathing in place with joints at center of rafters with 8d nails. - lay face grain of plywood sheathing perpendicular to rafters. - fit and cut sheathing in valleys and hips.	- Students simulate sheathing of roof and roofing on scale model of house corner section. - Students review manufacturer's booklets and illustrated text materials. - Teacher matches successful students who are interested in helping those having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task.	Roofing manufacturer's booklets <u>Modern Carpentry</u>	13 13 22
Involved		KNOWLEDGE A 1,6,9		
Productive		NUMBERS B 2b,4a,i,5		
Employable		APPLICATION C 5		
		PHYSICAL D 1a,d,e 2d 3a,b,c,d, e,f,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC29 TASK: Attach roof sheathing

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Nailing patterns Scaffold End matched boards Valleys Hips Flashing materials Swelling Shrinkage Face grain Staggered arrangement	Recognize and discuss 8d nails and ring nails. Determine the thickness of plywood for various rafter spacings and shingle types. Discuss the concepts of boards being flush and to allow space for swelling due to temperature changes.	• Collect samples of various sheathing materials so students are aware of sheathing materials, i.e. plywood, shiplap and other special materials. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual).
Supportive Instructional Materials: Consult with vocational instructor for samples of currently used roof sheathing materials.		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Install asphalt roofing materials

Code: CON - RC30

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify common asphalt roofing products: a. saturated felt b. roll roofing c. shingles. 2. describe the specific nomenclature for applying roofing materials: a. head lap b. side lap c. exposure. 3. perform the following job skills for installing roofing materials with accuracy to meet manufacturer's specifications: a. applying underlayment (felt) b. applying drip edge c. installing flashing at eaves d. installing flashing at roof valley e. installing chimney flashing f. installing vent stack flashing g. installing specific styles of shingles h. installing wood shingles. 4. safely operate a power stapler in applying roofing materials.	• Teacher provides demonstration of procedures and techniques for installation of all types of asphalt roofing products. • Students shingle mock-up roof structures in lab. • Students review illustrated procedures/techniques in texts. • Teacher makes contact with <u>each</u> student during the class period.	Modern Carpentry "Asphalt-Its Composition, Properties, and Uses"	13 22 13 56
Involved		KNOWLEDGE A 5,6,7,9		
Productive		NUMBERS B 2,4a		
Employable		APPLICATION C 5,8 PHYSICAL D 1a,c,d,e 2c 3--		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
 Code: CON - RC30 TASK: Install asphalt roofing materials

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Valleys	Recognize and interpret the following: square = 100 sq ft weight 240 lbs bundle = 1/3 square 33 1/3 sq ft = 80 lbs	• Discuss the need for using soft sole shoes (tennis shoes are excellent). • Drill deaf student extensively on language of the task. • Be careful in using words with multiple meanings when talking to lip reading deaf students. • Display and discuss commercial or teacher-made illustrations. Note: single bundles have good illustrations.
Hips		
Gables	Estimate the number of pounds of nails per square of shingles.	
Flashings		
Drip cap	Recognize various lengths of nails: 3/4" - 1 3/4" as well as types of nails i.e., roofing, galvanized, lead-headed.	
Vent and stack		
Galvanized nails		
Course		
Felt paper		
Ridge cap		
Chalk line		
Framing square		
Utility knife		
Starter strip		

Supportive Instructional Materials:
 Collect various samples of shingles.

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Assist in installing vapor barrier

Code: CON - RC31

Student Name: _____

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - describe the basic purpose of vapor barrier. - identify specific vapor barrier materials: - asphalt coated paper - aluminum foil - polyethylene films. - perform the following job skills with accuracy to meet construction code specifications: - apply vapor barrier materials around door and window openings, boxes, outlets, etc. - apply vapor barrier materials to wall sections following installation of heat ducts, plumbing, and electrical wiring.	KNOWLEDGE		
Involved		A 1	<u>Maximum Control Temperature</u>	13 38
Productive		NUMBERS	<u>Barrier Material</u>	
Employable		B 4a	"Criteria for Selection and Design of the Residential Slab on the Ground"	13 38
		APPLICATION		
		C 5	Thermal insulation thickness (charts)	16 38
		PHYSICAL		
		D 1a,d		
		2b		
		3		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC31 TASK: Assist in installing vapor barrier

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Vapor Barrier Warm-side Inside surface Moisture penetration Asphalt-coated paper Aluminum foil Polyethylene film	Square feet Linear feet Determine the number of square yards of vapor barrier material needed to cover a wall frame 8'x24'. Determine the number of square yards of vapor barrier in a roll.	• Pour hot liquid in cup, cover with clear plastic food wrap to show principle of a vapor barrier. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.
Suppervive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Install batt and blanket insulation

Code: CON - RC32

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - describe the basic types of batt and blanket insulation. - select and operate tools for cutting and installing batt and blanket insulation: - fine tooth, crosscut saw - shears - large knife - pneumatic stapler. - perform the following job skills in installing blanket insulation: - unroll blanket on floor and cut to required length. - staple top end to plate. - staple down each side along studs. - staple bottom edge to sole plate. - perform the following job skills in installing batt insulation: - place unit at the bottom of the stud and press into place. - start the second batt from top. - batt units together at midpoint. - overlap vapor barrier 1" to hold in place. - demonstrate procedures/techniques for installing insulation in: - wall section d. around outlet openings and plumbing - ceiling - under cross bridging pipes.	- Students install insulation in a full-size wall section mock-up. - Students review booklets illustrating the procedures/techniques of installation. - Teacher encourages small peer group cooperation and interaction. - Para-professionals provide sustained involvement with students having difficulty with this task.	"Fiberglass Insulation" "Fiberglass Insulation"	13 41 13 28
Involved		KNOWLEDGE A 7,9		
Productive		NUMBERS B 2a,4a		
		APPLICATION C 5		
Employable		PHYSICAL D 1a,b,d 2c, 3—		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: QON - RC32 TASK: Install batt and blanket insulation

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Blanket Roll Batt Fiberglass Thermal B.T.U. Pneumatic stapler Hand stapler Air space Vapor barrier	14 1/2" blanket fits between studs which are 16" apart on center (oc) 50' rolls will cover 6 vertical stud spaces. Define British Thermal Units (B.T.U.).	• Visit building sites. • Construct mock-up of installation job. • Display samples of various types of insulation. • Drill deaf student extensively on language of the task.
Supportive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Install reflective insulation

Code: CON - RC33

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - Identify specific forms of reflective insulation materials: - sing-e sheet - blanket. - Name two methods of installation of reflective insulation. - Describe the air space requirements for: - vertical wall sections, - ceilings and floors, - specific manufacturer's recommendations.	- Students install reflective insulation in a full-size wall section mock-up. - Students review manufacturer's booklets and charts illustrating installation procedures/techniques. - Teacher encourages small peer group cooperation and interaction. - Teacher concentrates his effort with students having difficulty.	"Reflective Insulation"	13 16
Involved		KNOWLEDGE		
Productive		A 7,9 NUMBERS		
Employable		B 2a,4a APPLICATION C 5 PHYSICAL D 1a,b,d 2c 3		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC33 TASK: Install reflective insulation

Basic Information for Cooperative Teaching		
Language of the Task	Quantitative Concepts	Suggestions:
Blanket Roll Batt Fiberglass Thermal B.T.U. Pneumatic stapler Hand stapler Air space Vapor barrier	14 1/2" blanket fits between studs which are 16" apart on center (oc). 50' rolls will cover 6 vertical stud spaces. Define British Thermal Units (B.T.U.).	• Visit building sites. • Construct mock-up of installation job. • Display samples of various types of insulation. • Drill deaf student extensively on language of the task.
Supportive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
TASK: Install fill insulation

Code: CON - RC34

Student Name:

Sheet 1 of 1

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. recognize the methods of installation of fill insulation: a. pouring b. blow-in. 2. describe the uses/applications of fill insulation: a. ceilings b. blown-in walls of permanent structure c. poured in core of block walls. 3. demonstrate the basic procedure for installing fill insulation: a. empty bag contents between joists or studs, over vapor barrier material. b. in ceiling application, level fill between joists with straight edge.	Task-Related Competencies	Instructional Materials		
Involved			Title	Media	
Productive					
Employable					
		KNOWLEDGE A 2,9	"Insulators and Conductors"	9 6	
		NUMBERS B 2b,4b			
		APPLICATION C 5			
		PHYSICAL D 1a-f, 2d, 3			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC34 TASK: Install fill insulation

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Pour bag Blown-in (commercial) Ceilings Joist-space Vapor barrier Masonry cavity Thermal resistance Insulation	Cubic feet 8" block U factor-standard Determine the number of cubic feet of insulation material in bags of different sizes. Calculate the number of cubic feet of material needed to distribute 6" deep over a given area.	• Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Handle and discuss fill insulation material.
Supportive Instructional Materials:		

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Assist in installing rigid insulation

Code: CON - RC35

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. describe the forms of rigid insulation materials: a. insulating board 1) exterior walls 2) roof sheathing b. glass fiber and foamed plastic 1) concrete slab floors 2) masonry walls 2. demonstrate the procedures for installing rigid insulation: a. nail to exterior wall or roof studs b. lay under slab flooring before pouring of slab c. bonding to exterior of masonry wall with mastic	• Students view film and filmstrip. • Students follow a teacher demonstration with hands-on supervision. • Students install rigid insulation on full size wall section mock-up in the construction lab.	Title	Media Bib.
Involved		KNOWLEDGE A 9		
Productive		NUMBERS B 4a, 5	"Lifetime Protection"	8 14
Employable		APPLICATION C 5, 8	"Building the Shell"	10 45
		PHYSICAL D 1a, b, d, e 2d 3		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC35 TASK: Assist in installing rigid insulation

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Foam Ceilings Basement walls Basement floors	Measure thickness in inches from 1"-4" thick. Multiply lengths times widths to find square foot areas since rigid insulation is sold by the sq/ft. Determine thickness of rigid insulation material for a given applicatio . Determine the number of square feet in a 4'x8' sheet of rigid insulation.	• Consult Building Trades Instructor for samples for identification and measurement. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.
Supportive Instructional Materials:		
Scraps supplied by local supplier or vocational instructor		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Assist in applying or installing acoustical insulation materials

Code: CON - RC36

Student Name:

Student Progress	Behavioral Task Knowledge/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	
			Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify the different types of acoustical insulation materials: - glass wool - sound deadening board - felt, metal, rubber strips - spring clips - resilient clips. - describe the different applications for acoustical materials: - door/window jambs - flooring - ceiling joists. - perform the following job skills in installing acoustical insulation materials: - install sound deadening board to underside of floor joists. - install spring clips and resilient clips to space sheathing materials from main studs or joists. - lay glass wool over subflooring and floating finish floor with sleepers. - install felt, metal, or rubber strips in door and window jambs.	- Representative from an acoustical manufacturing company (Upson or Homasate) speak to the class demonstrating the application of samples of acoustical insulation materials. - Students review illustrative manufacturer's booklets on acoustical insulation materials. - Para-professionals provide sustained involvement with students having difficulty with this task.	"Sound Ending Board"	13 24
Involved		KNOWLEDGE A 9 NUMBERS B 4a,5 APPLICATION C 5,8 PHYSICAL D 1a,b,c,e 2d 3	"Acoustical Insulation Materials"	13 52
Productive				
Employable				

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC36 TASK: Assist in applying or installing acoustical insulation materials

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Glass wool Fibrous Stapling Rigid Poured Vapor barrier Exterior wall Fiber glass Foamed plastic Crawl space Air leakage Weather stripping Batts Masking	Double walls Acoustical plastic Suspended ceiling <	

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Recognize types and parts of windows

Code: CON - RC37

Student Name: _____

Sheet 1 of 1

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify by name specific types of windows: - sliding - double hung - horizontal sliding - swinging - casement - awning - hopper - multiple use - fixed - jalousies - fixed windows. - identify and describe the position of parts of a window: - sill - jamb - casing - drip cap - stool - apron - side stile - rail.	- Teacher develops activity/quiz worksheet on identification of windows and their component parts. - Students review window literature from manufacturer. - Students simulate installation of windows on wall section with rough window opening in construction lab. - Teacher encourages small peer group cooperation and interaction. Note: This task is performed as a part of the following task.	"Window Details" Window manufacturer's literature Anderson Corp. Malta Windows Rimco Co.	12 13
Involved		KNOWLEDGE		
Productive		A 1,9 NUMBERS		
Employable		APPLICATION PHYSICAL		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC37 TASK: Recognize types and parts of windows

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Sliding double hang horizontal Swinging vertical-casements horizontal-awnings hoppers Fixed jalousies Mullions Cranking mechanisms Latches Screen and storm sash Outside clearance Lock handle Weather tightness Window well	Consult with vocational instructor about standard window height i.e. 36", 42", 48", and standard window widths i.e. 18", 24" as they relate to various types of windows.	• Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Visit a building materials supplier to discuss various types and standard sizes of windows.	
Supportive Instructional Materials:			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Assist in setting windows

Code: CON - RC38

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - perform the following job skills while installing and setting windows: - unpack from carton and inspect for shipping damage. - check rough opening for size. - prime window before installation. - place window in openings and temporarily secure in place. - adjust wedges so frame is level. - nail through the lower end of the side casing to secure bottom in place. - drive nails temporarily into top of side casing. - check for sag in the head or bow. - nail window permanently into place with aluminum or galvanized casing nails, spaced 16" o.c. - use a nail set in setting nail heads below surface in window frame material.	- Students simulate installation of windows on a full-size wall section with rough window opening in the construction lab. - Students review window manufacturer's literature. - Teacher concentrates his effort with students having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task.	Window manufacturer's literature Anderson Corp. Malta Windows Rimeo Co.	13
Involved		KNOWLEDGE		
Productive		A 2,3,9 NUMBERS		
Employable		B 4a,i,5 APPLICATION		
		C 5,7,8 PHYSICAL		
		D 1a,b,e 2c 3a,b,c,f,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC38 TASK: Assist in setting windows

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Plumb	Discuss the concepts of level and plumb as they relate to installing windows.	• Collect installation instructions to discuss so students will recognize and follow common manufacturer's directions. • Discuss the principles of judging length of nails for penetration. • Discuss reasons for using an insulated window. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task.
Diagonal braces	Simulate centering a window in a rough opening, i.e. 36" window centered in a 37 1/2" rough opening.	
Spacer strips	Common trademarks/tradenames	
Primed	Thermalpane	
Weather stripping	Pilla	
Sag	Twindow	
Galvanized casing nails	Anderson Windowwalls	
Polyethylene film		
Fixed units		
Sash		
Glazing		
Insulating glass		

Supportive Instructional Materials:

Collect 16d finishing nails.

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Assist in installing door frames

Code: CON - RC39

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods			
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify the different parts of the door frame. 2. perform the following job skills while installing door frames: a. cut out sill area if necessary to fit. b. place frame in opening, center it horizontally, and secure with temporary brace. c. drive a nail through the casing into the wall frame at the bottom of each side. d. insert blocking or wedges between the studs and the top of the jamb. e. place additional wedges between the jambs and the stud frame at the location of the lock strike and hinges. f. secure the wedges by driving a nail through jamb, wedge, and into the stud. g. nail casing in place with nails located 16" o.c.	Task-Related Competencies	Instructional Materials		
Involved		KNOWLEDGE A 2,3,9 NUMBERS B 4a,i, 5 APPLICATION C 5,7,8 PHYSICAL D 1a,b,e 2c 3a,b,c,f,g	Title	Media	
Productive					
Employable					
			"Door Construction"	12	56
			Modern Carpentry	13	22
			Door Details	13	35

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - K039 TASK: Assist in installing door frames

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Clear pine or redwood	Discuss various common door sizes, i.e. exterior doors (6'8" high, 7' available)	Suggestions: • Stress the importance of being extremely accurate and if there are any questions, ask advice before doing a job. • Emphasize that hammering must be 100% accurate since missing the nail leaves "hammer marks" on finished surfaces. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual).
Frick mold	main entrance door (3'0" wide)	
Casing nails	service and rear (2'8" and 2'6") FHA minimum (2'6" wide)	
Header	Recognize various sizes of finishing nails, i.e. 10d, 12d, 16d.	
Hambs		
Sills		
Rabbit joint		
r.o. (rough opening)		
Blocking		
Level		
Casing		
Threshold		
Pre-hung		
Heat loss		
Condensation		

Supportive Instructional Materials:

Collect 16d finishing nails.

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Install a garage door

Code: CON - RC40

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name and describe the location of different parts of a garage door and frame. 2. identify the different types of garage doors. 3. perform the following job skills while installing a garage door: a. tack stops temporarily in place. b. assemble door sections in opening and attach hinges. c. attach rollers to door. d. place track on rollers and attach track to jamb. e. attach horizontal track sections. f. raise and prop door in open position. g. attach counterbalancer. h. open and close door, making adjustments. i. reset stops.	KNOWLEDGE	"Garage Door Information and Details" (pamphlet)	13 23
Involved		A 2,3,9		
Productive		NUMBERS		
Employable		B 4a,i, 5		
		APPLICATION		
		C 5,7,8		
		PHYSICAL		
		D 1a,b,e 2c 3a,b,c,f,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC40 TASK: Install a garage door

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Swing up Roll up Counterbalancing With or without windows Fiberglass Wooden Contemporary Traditional Jambs Header Remote control Torsion spring Mill work order Masonry	Recognize FHA minimum standards: width 8' height 6'4" (single) common width 9' two car width 16' standard heights 6'8" or 7' Practice making accurate (within 1/16") measurements in the range of 6' to 9'.	• Drill deaf student extensively on language of the task. • Reinforce the importance of being accurate since installing the garage door is a finishing operation. • Since appearance and accuracy are important qualities, ask questions when there is lack of understanding.
Supportive Instructional Materials: Collect installation instructions from local supplier or the vocational instructor.		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Construct rake and cornice sections

Code: CON - RC41

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods																																									
Introduced	Involved																																											
Productive	Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name the components of a rake and cornice section: a. lookout b. soffit c. fascia d. ledger e. frieze f. plancier g. soffit vent. 2. perform the following job skills in framing in a rake and cornice section: a. nail a ledger along a pre-determined line. b. cut the lookouts (2x4 material) to length. c. install lookouts by nailing to rafter and toe nailing to ledger. d. cut soffit material to size and nail or screw to lookouts with rust-resistant fasteners. e. install screened slots or vents in soffit to provide for air circulation.	- Students simulate construction of rake and cornice section on scale model or wall section mock-up. - Teacher provides demonstration of rake and cornice construction techniques using transparencies. - Students review illustrated materials. - Para-professionals provide sustained involvement with students having difficulty with this task.																																									
			<table><thead><tr><th>Task-Related Competencies</th><th colspan="2">Instructional Materials</th></tr><tr><td></td><th>Title</th><th>Media</th></tr></thead><tbody><tr><td>KNOWLEDGE</td><td></td><td></td></tr><tr><td>A 2,3,9</td><td>Modern Carpentry</td><td>13</td></tr><tr><td>NUMBERS</td><td>Audel's Builder's Manual</td><td>13</td></tr><tr><td>B 4a,i, 5</td><td>"Roof Construction"</td><td>12</td></tr><tr><td>APPLICATION</td><td>"Aluminum Soffit and Fascia System"</td><td>13</td></tr><tr><td>C 5,7,8</td><td></td><td></td></tr><tr><td>PHYSICAL</td><td></td><td></td></tr><tr><td>D 1a,b,e</td><td></td><td></td></tr><tr><td>2c</td><td></td><td></td></tr><tr><td>3a,b,c,f,g</td><td></td><td></td></tr></tbody></table>	Task-Related Competencies	Instructional Materials			Title	Media	KNOWLEDGE			A 2,3,9	Modern Carpentry	13	NUMBERS	Audel's Builder's Manual	13	B 4a,i, 5	"Roof Construction"	12	APPLICATION	"Aluminum Soffit and Fascia System"	13	C 5,7,8			PHYSICAL			D 1a,b,e			2c			3a,b,c,f,g			<table><tbody><tr><td>22</td></tr><tr><td>32</td></tr><tr><td>29</td></tr><tr><td>1</td></tr></tbody></table>	22	32	29	1
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SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC41 TASK: Construct rake and cornice sections

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Cornice trim boards	Roof sheathing	Recognize and select 1/2", 3/8", and 1/4" thick plywood samples. Discuss the "on-center" concept. Simulate nail spacing at 6" intervals. Identify a miter joint as being cut at a 45° angle.	• Attention to details and accuracy is of extreme importance. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). • Drill deaf student extensively on language of the task.
Breezeway	Exterior trim		
Cornice-eave	Caulking compounds		
Boxed cornice designs	Chalkline		
Rafters	Toe-nailing		
Underside	Gable		
Overhangs			
Rake			
Trim members			
Fascia			
Ledger strip			
Lookouts-nailers			
Nailing strip			
Mineral fiber board			
Boxed rake section			
Supportive Instructional Materials:			
Collect samples of plywood of various thicknesses.			

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

TASK:

Install horizontal siding

Code: CON - RC42

Sheet 1 of 2

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name the types of horizontal siding: a. clapboards b. bevel siding c. rabbeted bevel siding d. rustic e. drop. 2. identify the common sizes of siding: a. nominal size (width) b. dressed dimensions: 1) standard thickness 2) standard face width. 3. install flashing around openings with: a. copper-coated paper b. polyethylene film. 4. perform the following job skills for the installation of horizontal siding: a. transfer each of the markings on the story pole to each inside and outside corner to be sided. b. nail a spacer strip along the foundation line. c. apply the first piece, allowing bottom edge to overlap strip. d. nail metal corners to inside corners of outside walls. e. nail metal corner caps over outside corners. f. cut and closely fit siding. g. caulk or treat siding with preservative after attached.	• Siding company sales representative visits class to discuss characteristics of siding materials. • Students simulate installation of horizontal siding on a scale model or mock wall section in the lab. • Students review manufacturer's brochures and information. • Teacher matches successful students who are interested in helping those having difficulty.	Manufacturer's booklets on siding materials Armstrong Co. Insulite Co. Monsonite Co.	13
Involved		KNOWLEDGE A 1,2,6,9 NUMBERS B 4a,i		
Productive		APPLICATION C 5		
Employable		PHYSICAL D 1a,d,e 2a 3a,b,c,f,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC42 **TASK:** Install horizontal siding

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Sheathing	Drip edge	• Since siding is to minimize the air leakage and moisture passage, the installation procedures must be followed conscientiously. • Drill deaf student extensively on language of the task. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students.	
Sheathing paper	First course		
Asphalt saturated felt	Lapped		
Drip edge	Story pole		
First course	Notching		
Vapor barrier	Chalk line		
Flashing	Aluminum		
Drip caps	Zinc coated		
Head flashing	Non-corrosive		
Soffit	Countersunk		
Jams	6 mill polyethylene film		
	Successive		
	Beveled		
	6d nails		
	Square butt joints		
	7d nails		
	Scaffolds		
Supportive Instructional Materials: Collect samples of horizontal siding materials.			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
TASK: Install horizontal siding

Sheet 2 of 2

Code: CON - RC/2

Student Name: _____

Student Progress	Behavioral Task Knowledge, Task Skills	Instructional Methods																				
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 5. describe and demonstrate the following special techniques for nailing siding: a. types of nails to use: 1) zinc coated 2) aluminum 3) non-corrosive. b. face nail siding to each stud: 1) 6d nails 2) 8d nails. c. location of nails: 1) 1/2" above the butt edge or 2) nail just above lap edge. d. drill holes if siding material splits.	<table border="1"> <tr> <td data-bbox="827 860 904 1075">Task-Related Competencies</td> <td colspan="3" data-bbox="827 107 904 860">Instructional Materials</td> </tr> <tr> <td data-bbox="904 860 904 1075"></td> <td data-bbox="904 274 904 860">Title</td> <td data-bbox="904 186 904 274">Media</td> <td data-bbox="904 107 904 186">Bib.</td> </tr> <tr> <td data-bbox="904 860 904 1075">KNOWLEDGE</td> <td colspan="3" data-bbox="904 274 1352 860" rowspan="3"></td> </tr> <tr> <td data-bbox="904 860 904 1075">NUMBERS</td> </tr> <tr> <td data-bbox="904 860 904 1075">APPLICATION</td> </tr> <tr> <td data-bbox="904 860 904 1075">PHYSICAL</td> <td colspan="3" data-bbox="904 274 1352 860"></td> </tr> </table>			Task-Related Competencies	Instructional Materials				Title	Media	Bib.	KNOWLEDGE				NUMBERS	APPLICATION	PHYSICAL			
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KNOWLEDGE																						
NUMBERS																						
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PHYSICAL																						
Involved																						
Productive																						
Employable																						

SUBCLUSTER:

Code: ____ - ____ TASK:

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Supportive Instructional Materials:		

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Install vertical siding

Code: CON - RC43

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods	
		Task-Related Competencies	Instructional Materials
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify by name different types of vertical siding: - board and batten - matched boards - patterned boards. - perform the following job skills for installing vertical siding: - install matched vertical siding with 8d nails less the four feet apart. - undercut boards to form drip cap. - nail batten strips to only one side of siding board to permit expansion and contraction.	- Students simulate installation of vertical siding on scale model or wall section mock-up in lab. - Teacher demonstrates procedures for installing vertical siding at a building site. - Teacher concentrates his effort with students having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task.	Media Bib. Siding manufacturer's booklets 13
Involved		KNOWLEDGE	
Productive		A 1,6,9	
Employable		NUMBERS	
		B 4a,i	
		APPLICATION	
		C 5	
		PHYSICAL	
		D 1a,d,e	
		2a	
		3a,b,c,f,g	

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC43 TASK: Install vertical siding

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Gable ends	Practice making measurements from 1" to 12" with accuracy to 1/16" and measurements from 8' to 12" with accuracy to 1/4".	Suggestions: • Read and interpret a set of manufacturer's directions. • Discuss different wall finishes for different needs i.e. climate, durability, cost, creative and critical thinking in judgment. • Emphasize the importance of nailing accuracy since missing the nail may cause "hammer marks" on a finished surface. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). • Drill deaf student extensively on language of the task.
Outercoursing		
Undercoursing		
Expansion	Prepare to sort and drive 3d, 6d, 8d, finishing nails.	
Contraction	Compute areas in square feet.	
Adjacent		
Vertical		
Random boards		
Batten strip		
Triple starting course		
Backer blocks		
Starter course		
Undercut		
Waterdrip		
Composition material		
Supportive Instructional Materials:		
Collect various sizes of finishing nails and different types of vertical siding.		

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Assist in installing siding systems

Code: CON - RC44

Student Name:

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify the basic types of systems: - lap - aluminum fastener. - demonstrate the installation of the lap joint system: - bottom strip of a piece of siding hooks over the top of the previously applied course. - nail piece in place at top through pre-drilled holes. - drill metal joint molding in place with hammer. - caulk joints. - demonstrate the installation of an aluminum fastener system: - attach a metal starter strip to the bottom of the sheathing or sill plate. - top edge of siding is nailed in place with a special metal fastener every 16". - bottom edge of attached piece is driven into prong of fastener underneath by placing a softwood block over the position and striking with a hammer.	- Instructor provides actual experience with on site siding installation. - Students simulate the assembly and installation of a siding system donated from a local business on a wall section mock-up in the lab. - Students survey literature to review different types of systems. - Teacher makes contact with <u>each</u> student during the class period. - Teacher matches successful students who are interested in helping those having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task.	Siding system manufacturer's literature Major Materials, Inc. Byrd Corp.	13
Involved		KNOWLEDGE		
Productive		A 1,9		
Employable		NUMBERS		
		B 4a		
		APPLICATION		
		C 5		
		PHYSICAL		
		D 1a,b 2c 3a,b,c,f,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC44 TASK: Assist in installing siding systems

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Mounting strip	Discuss the concepts of level (horizontal) and plumb (vertical).	
Joint molding	Practice measuring distances from 1 to 8 feet with accuracy of 1/4".	
Vertical siding	Sort rustproof nails from common nails of the same size.	
Starter strip		
Batten strip		
Hardboard batten backers		
Aluminum siding		
Baked-on enamel		
Alloy		
Gauge		
Inter-locking		
Grounding		
Vinyl siding		
Outside corner post		
Supportive Instructional Materials:		
Various siding materials and nails collected from local suppliers or vocational instructor		
Tape measure or folding rule		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 2

TASK: Install gutter systems

Code: CON - RC45

Student Name: _____

Student Progress		Behavioral Task Knowledges/Task Skills	Instructional Methods		
Introduced	Involved				
Productive	Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify specific gutter system components: - K-gutter - square downspout - K-miter - inside - outside - slip joint connector - end cap - elbow - outlet tube - K-strainer - pipe band - fascia hanger - spike or ferrule. - recognize the basic purpose of gutter system control roof drainage. - select the tools for assembling gutter systems: - pop rivets - sheet metal screws - screw drivers - hammer (claw). - perform the following job skills with accuracy to meet manufacturer's specifications: - assemble slip joints - attach hangers to fascia - attach cutters to hangers.	- Students view film and review illustrated text materials. - Students practice assembly/installation of gutter system on wall section mock-up. - Teacher develops activity/quiz on identification of system components. - Students follow a teacher demonstration with "hands-on" supervision. - Teacher encourages small peer group cooperation and interaction.		
		Instructional Materials			
		Task-Related Competencies	Title	Media	Bib.
		KNOWLEDGE			
		A 3,6,7,9	Modern Carpentry	13	22
		NUMBERS	"Rain Carrying Equipment"	8	1
		B 4a			
		APPLICATION			
		C 5			
		PHYSICAL			
		D 1a,d,e			
		2b			
		3			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC45 TASK: Install gutter system

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Downspout Elbow Gutter Nail ferrule Hanger strap Slip joint Sealer Aluminum Pre-finish End cap Inside/outside corners Pop-rivets	Practice measuring from 2' to 8' in length with 1/4" accuracy. Recognize 6' and 8' lengths. Determine the total length of gutter needed for the specific project the student is working on in the construction lab.	• Visit a construction site where gutters are being installed. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Teacher and deaf student should cooperatively develop some simple signs related to language of the task. • Be careful in using words with multiple meanings when talking to lip reading deaf students.

Supportive Instructional Materials:

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
TASK: Install gutter systems

Sheet 2 of 2

Student Name: _____

Code: CON - RC45

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: d. assemble components with pop rivets or sheetmetal screws. e. slope system for drainage (calculation and layout).	KNOWLEDGE		
Involved		NUMBERS		
Productive		APPLICATION		
Employable		PHYSICAL		

SUBCLUSTER:

Code: - TASK:

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Supportive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Prepare a brick veneer finish

Code: CON- RC46

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify and describe the location of components for brick veneer finish: a. metal ties b. air space c. base flashing d. weep holes. 2. describe the different types of veneer exterior finishes: a. brick b. concrete units c. stone. 3. demonstrate basic techniques in preparing a brick veneer facing: a. install base flashing over top of foundation and 12" up on sheathing. b. lay bricks on top of foundation with: 1) weep holes in bottom row for drainage. 2) 3/4" air space between sheathing and brick. 3) metal tie strips to secure brick facing to framework.	- Teacher and/or resource person provides a demonstration of the procedures for preparing a brick veneer finish. - Students lay up corners and other small brick projects in the construction lab. - Students review project booklets and select a group activity project. - Teacher matches successful students who are interested in helping those having difficulty. - Para-professionals provide sustained involvement with students having difficulty with this task.	"Brick Laying" "Brick Laying-Vocational Training Trade Projects" (series of booklets)	12 29 13 48
Involved		KNOWLEDGE A 1,9 NUMBERS B 4a,i APPLICATION C 5,7 PHYSICAL D 1a,b 2c 3a,b,c,f,g		
Productive				
Employable				

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC46 TASK: Prepare a brick veneer finish

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Veneer Masonry Metal lath Base flashing Louvers Air space	Discuss the concepts of level (horizontal) and plumb (vertical).	• Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Simulate brick laying arrangements with toy (plastic) bricks or rectangular sugar cubes.	
Supportive Instructional Materials: Collect samples of bricks for stacking			

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Recognize interior finishing operations

Code: CON - RC47

Student Name: _____

Student Progress	Introduced	Involved	Productive	Employable	Behavioral Task Knowledges/Task Skills	Instructional Methods		
						Task-Related Competencies	Instructional Materials Title	Media Bib.
					Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify and describe the sequence for the following interior finishing operations: a. plaster b. drywall c. lath d. plaster grounds e. interior fasteners f. paneling g. furring h. ceiling tile i. suspended ceiling j. partical board k. base l. casing m. stair well n. stair stringer o. riser tread p. stair riser q. cove molding r. base shoe s. mullion casing t. wood flooring.	- Students label the interior components on a cut-away drawing. - Students in small groups review a set of building specifications to determine the specification for each interior finish component on a wall section mock-up. - Students practice coping joints. - Students follow a teacher demonstration with "hands-on" supervision. - Para-professionals provide sustained involvement with students having difficulty with this task.		
					KNOWLEDGE			
					A 1-9			
					NUMBERS		Modern Carpentry	13 22
							Wood Construction	13 32
					APPLICATION			
					PHYSICAL			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC47 TASK: Recognize interior finishing operations

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Surfaces Materials Underlayment Baseboard Facing Drawers Trim Plastic laminate Hardware Base shoe	Recognize 6, 8, 10, 12 foot lengths as they relate to finish materials.	
Supportive Instructional Materials:		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK: Assist in applying ceiling tile

Code: CON - RC48

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify the different types of ceiling tiles. 2. demonstrate the procedures for applying the following ceilings: a. ceiling tile: 1) space and nail furring strips 2) lay out ceiling 3) apply ceiling tile. b. suspended ceiling: 1) lay out ceiling 2) apply wall molding 3) install metal runner 4) set in panels.	• Students review ceiling tile manufacturer's booklets and brochures. • Ceiling manufacturer's representative can provide information and materials for a relevant instructional program. • Students follow a teacher demonstration with "hands-on" supervision. • Teacher encourages small peer group cooperation and inter-action. • Teacher matches successful students who are interested in helping those having difficulty.	Manufacturer's booklets	13
Involved		KNOWLEDGE A 1-9 NUMBERS B 4a, 5		
Productive		APPLICATION C 5-7		
Employable		PHYSICAL D 1a, b 2c 3a, b, c, f, g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC48 TASK: Assist in applying ceiling tile

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Ceiling tile Furring strips Solid plaster Plastic board Pattern Texture Overlapping Tongue Groove edge Flange Staples Adhesive	Recognize standard sizes of ceiling tile: 12"x12", 24"x24", 16"x32".	• Know types of materials used to make ceiling tile selection based on qualities desired. • Tactile experience with pattern and texture. • Stress the importance of the final appearance. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf student. • Be aware of the key word interpretation which lip reading deaf students make from your speech.
Supportive Instructional Materials:		

SUBCLUSTER:

RESIDENTIAL CONSTRUCTION

Sheet 1 of 1

TASK:

Hang interior doors

Code: CON - RC49

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials Title	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. describe and demonstrate the following procedures for hanging an interior door: a. set jamb plumb and level b. hinge jamb c. fit door d. hinge door e. lock door f. mount door stop g. case off door.	- Teacher directs demonstration of a procedure for hanging an interior door. - Students follow a teacher demonstration with "hands-on" supervision. - Students hang interior doors on a plumb and square door frame previously assembled in the lab. - Teacher encourages small peer group cooperation and inter-action. - Para-professionals provide sustained involvement with students having difficulty with this task.		
Involved		KNOWLEDGE A 9		
Productive		NUMBERS B 4a, 5		
Employable		APPLICATION C 5,7 PHYSICAL D 1a,b 2c 3a,b,c		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC49 TASK: Hang interior doors

Basic Information for Cooperative Teaching			Suggestions: • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Informally encourage voluntary buddy system for assisting deaf students (individualize without calling attention to the individual). • Extreme care must be taken in handling and installing doors to insure professional appearance.
Language of the Task	Quantitative Concepts		
Partition	Gauge	Identify appropriate size and types of nails.	
Side jamb	Hinge jamb	Recognize and/or measure standard door sizes 2'8", 2'10", 3', etc.	
Head jamb	Casing		
Kerfed	Miter joint		
Cupping (warping)	Straight edge		
Bevel	Level		
Panel door			
Flush door			
Sash door			
Louvered door			
Storm door			
Screen door			
Spacer blocks			
Spreader			
Supportive Instructional Materials:			

SUBCLUSTER: RESIDENTIAL CONSTRUCTION
TASK: Apply interior trim

Sheet 1 of 1

Code: CON - RC50

Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: - identify by name the different interior trim items. - demonstrate the appropriate procedures for installing each of the following interior trim items: - base - base shoe - window stool - window apron - window casing - ceiling cove - stair risers - stair treads.	KNOWLEDGE	Practical House Carpenter	13 42
Involved		A 1,9	Modern Carpentry	13 22
Productive		NUMBERS	Carpentry and Builder's Guide Vol. I.	13 25
Employable		B 4a, 5 APPLICATION C 5,7 PHYSICAL D 1a,b 2c 3a,b,c	"Staircase Construction"	12 29

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC50 TASK: Apply interior trim

Basic Information for Cooperative Teaching		Suggestions:
Language of the Task	Quantitative Concepts	
Coped joint	Measure 6' to 8' lengths within 1/16" accuracy.	• Drill deaf student extensively on language of the task. • Accuracy in cutting, nailing, and finishing are of extreme importance.
Base	Recognize 45° angle cuts on matching pieces as miter joints.	
Double-hung window		
Sash		
Quarter round		
Caulking compound		
Miter		
Door and window molding		
Mullion trim		
Head casing		
Apron		
Base shoe		
Lacquer		Supportive Instructional Materials:
Varnish		
Resilient tile		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

TASK: Lay interior floors

Code: CON - RC51

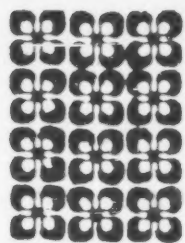
Student Name: _____

Student Progress	Behavioral Task Knowledges/Task Skills	Instructional Methods		
		Task-Related Competencies	Instructional Materials	Media Bib.
Introduced Involved Productive Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will: 1. identify by name the common types of interior floors. 2. describe the advantages and disadvantages for each type of interior floor. 3. lay each of the following interior floors, following manufacturer's instructions and specifications: a. parical board b. wood strip flooring c. wood block flooring d. tile e. others.	• Students simulate laying different floors in a mock-up of different house rooms. • Factory representatives for flooring companies talk to class describing and demonstrating new products. • Students organize a trip to lumber company to check on floor covering materials. • Students view slides, transparencies, and illustrated materials.	"Hardwood Floors" "Finishing Hardwood Floors" "Interior Building Maintenance for Homes" "Interior Trim"	13 9 14 37 11 36 12 29
		KNOWLEDGE A 1,6,9 NUMBERS B 4a,i APPLICATION C 5 PHYSICAL D 1a,c,d,e 2a,b 3a,c,e,g		

SUBCLUSTER: RESIDENTIAL CONSTRUCTION

Code: CON - RC51 TASK: Lay interior floors

Basic Information for Cooperative Teaching			Suggestions:
Language of the Task	Quantitative Concepts		
Planks (unit blocks) Resilient flooring Asphalt tile Vinyl-asbestos tile Vinyl tile Rubber tile Linoleum Ceramic tile Edge-grain surface Tongue and grooved (side and end matched) Metal splines Slate Hardwood Carpet	Calculate areas by multiplying lengths by widths of floor areas.	• Discuss various kinds of flooring by viewing popular "Home Remodeling" magazines. • Speak distinctly and slowly, use simple sentences, and look directly at lip reading deaf students. • Drill deaf student extensively on language of the task.	
Supportive Instructional Materials:			
Collect "Better Homes" and "Home Remodeling" magazines with illustrated floor designs and various flooring materials.			



**INSTRUCTIONAL
MATERIALS
BIBLIOGRAPHY**

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CONSTRUCTION CLUSTER

<u>Bib. Ref. No.</u>	<u>Company Name/Address</u>	<u>Title</u>
1.	Alcoa Aluminum Co. of America 1213 Alcoa Building Pittsburgh, Pa 15219	Reflective Insulation (booklets/charts) "Rain Carrying Equipment" (free loan) "Aluminum Soffit and Fascia System"
2.	American Floor Company (contact local lumber company for exact address of distributor)	<u>Floor Maintenance</u> "Machines at Work"
3.	American Iron and Steel Co. (contact local lumber company for exact address of distributor)	"Galvanized Steel Pipe for Plumbing" "Plumbing Traps and Vents"
4.	American Technical Society 848 E. 58th Street Chicago, Illinois 60637	<u>Estimating for Building</u> <u>Trades</u> <u>Building Trades Blueprint</u> <u>Book, Parts I & II</u> "Lumber Handling and Piling"
5.	Arco Publishing Company 219 Park Avenue, South New York, N.Y. 10003	"Modern Power Tool and Woodworking Book" <u>How to Build Cabinets for</u> <u>A Modern Kitchen</u>
6.	Armstrong Company (contact local lumber company for exact address of a distributor)	"Sheathing"
7.	Bailey Film Associates 11559 Santa Monica Blvd. Los Angeles, Ca 90025	"Power Tools"
8.	Bobbs Merrill Co., Inc. P.O. Box 693 Lansing, Michigan 48903	<u>Plumbers and Pipefitters</u> <u>Library</u>

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| 9. | E.L. Bruce Co., Inc.
1700 Thomas Street
Memphis, Tenn 38101 | "Hardwood Floors" |
| 10. | Cenco Educational Films
2600 S. Kostner Avenue
Chicago, Illinois 60623 | "Power Tools" |
| 11. | Colonial-Williamsburg, Inc.
Goodwin Building, Box C
Williamsburg, Pa 23185 | "Cabinetmaking" |
| 12. | Cornell University
Film Center
Ithaca, N.Y. 14850 | "Connecting Wires in an
Outlet" |
| 13. | DCA Educational Products, Inc.
4865 Stenton Avenue
Philadelphia, Pa 19144 | "Hand Saw Nomenclature"
"Portable Drills"
"Radial Saw"
"Lumber Grades and
Measurements"
"Window Details" |
| 14. | Dow Chemical Company
2030 Dow Center
Midland, Michigan 48640 | "Lifetime Protection" |
| 15. | E.I. DuPont Co.
1007 Market Street
Wilmington, Ce 19898 | "Finishing Wood" |
| 16. | Ealing Corporation
2225 Massachusetts Avenue
Cambridge, Ma 02140 | "Insulators and Conductors" |
| 17. | Encyclopaedia Britannica
Educational Corporation
425 N. Michigan Avenue
Chicago, Illinois 60611 | "Lumber for Houses" |
| 18. | Eye-Gate House, Inc.
Ronald Stevens
14816 Greenbriar Court
Plymouth, Michigan 48170 | "Building the Frame of
A House" |

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| 19. | Franklin Walls, Inc.
R. Spaulding
Box 331
Comstock Park, Michigan 49321 | <u>First Book of Lumber</u> |
| 20. | GAF Corporation Reprographic Products
140 W. 51st Street
New York, N.Y. 10020 | "Framing for Openings"
"Pouring the Footings"
"Footings"
"Rafter Construction" |
| 21. | General Motors Corporation
3044 West Grand Blvd.
Detroit, Michigan 48238 | "ABC'S of Handtools" |
| 22. | Goodheart-Wilcox Co., Inc.
125 W. Taft Drive
South Holland, Illinois 60473 | <u>Modern Carpentry</u>
<u>Cabinetmaking and Millwork</u> |
| 23. | Haas Door Co.
(contact local lumber company
for exact address of distributor) | "Garage Door Information
and Details" |
| 24. | Homasote Co.
(contact local lumber company
for exact address of distributor) | "Sound Ending Board" |
| 25. | Howard W. Sams & Co., Inc.
4300 West 62nd Street
Indianapolis, Indiana 46238 | <u>Carpentry and Builder's</u>
<u>Guide, Volume I</u>
"Getting the Most from Your
Home Power Tools"
<u>Building Maintenance</u>
<u>Plumbing and Heating</u>
<u>Janitor-Custodian</u> |
| 26. | Insulite Co.
(contact local lumber company
for exact address of distributor) | "Sheathing" |
| 27. | Interstate Printers and Publishers,
Inc.
Danville, Illinois 61832 | "Electrical Identification" |
| 28. | Johns-Manville Company
22 E. 40th Street
New York, N.Y. 10016 | "Fiberglass Insulation" |

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| 29. | Minnesota Mining and Manufacturing Co.
2501 Hudson Road
St. Paul, Minnesota 55404 | "Brick Laying"
"Staircase Construction"
"Interior Trim"
"Ceiling Frame"
"Footings and Foundations"
"Footing Design"
"Block Laying"
"Wall Framing"
"Roof Construction" |
| 30. | Maize Nails Co.
(contact local lumber company
for exact address of distributor) | "Correct Nailing"
Wall Chart |
| 31. | Masonite Corporation
Dept. TR-10
Box 777
Chicago, Illinois 60690 | "Sheathing" |
| 32. | McGraw Hill Book Company
Tom Troseth
2358 Crestview, S.W.
Wyoming, Michigan 49509 | <u>Audel's Builder's Manual</u>
<u>Audel's Electricity</u>
<u>Motor Application and</u>
<u>Maintenance</u>
"Layout Using Marking Gauge"
"Care and Use of Table Saw"
"Sectioning"
<u>Wood Construction</u> |
| 33. | McIntyre, Inc. | "Planes and Their Uses"
"Common and Finish Nails" |
| 34. | McKnight and McKnight Pub. Co.
P.O. Box 854
Bloomington, Illinois | <u>Architectural Drafting and</u>
<u>Design</u> |
| 35. | Morgan Millwork Company
113 W. North Avenue
Baltimore, Md 21201 | <u>Door Details</u> |
| 36. | NASCO
National Agricultural Supply Co.
Fort Atkinson, Wisconsin 53558 | "Wiring for Your Home"
"Interior Building Maintenance for Homes"
"Kinds of Lumber"
"Laying Out and Cutting Common Rafters"
"Circuits" |

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| 37. | National Paint and Varnish Co.
2835 E. Washington Blvd.
Los Angeles, California 90023 | "Finishing Hardwood
Floors" (pamphlet) |
| 38. | National Academy of Science
2101 Constitution Avenue, N.W.
Washington, D.C. 20418 | <u>Maximum Control Temperature</u>
<u>Barrier Material</u>
"Criteria for Selection and
Design of the Residential
Slab on the Ground"
Thermal Insulation Thickness
(charts) |
| 39. | National Restaurant Association
Educational Department
1530 N. Lake Shore Drive
Chicago, Illinois 60610 | <u>Floors and Floor</u>
<u>Maintenance</u> |
| 40. | National Safety Council
425 N. Michigan Avenue
Chicago, Illinois 60611 | "Lumber Handling and Piling" |
| 41. | Owens Corning Fiberglass Co.
Fiberglas Tower
Toledo, Ohio 43601 | "Fiberglass Insulation" |
| 42. | Plenum Publishing Company
227 W. 17th
New York, N.Y. 10011 | <u>Practical House Carpenter</u>
<u>Builder's Guide</u> |
| 43. | Ronnel Truss Plates
(contact local lumber company
for exact address of distributor) | <u>Truss Design</u> |
| 44. | Serina Press
70 Kennedy Street
Alexandria, Va 22305 | "Carpentry Part I -
Measuring, Marking, and
Leveling Tools" |
| 45. | Society for Visual Education
1345 Diversey Parkway
Chicago, Illinois 60614 | "Building the Shell" |
| 46. | Stanley Tools
600 Myrtle Street
New Britain, Conn. 06050 | Charts |

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375 Park Avenue
New York, N.Y. 10022 | "Plumbing Joints"
"Power Drills for Wood-
working"
"Hammers and Nails"
"Correct Use of Nails"
"Glues and Clamps" |
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McLean, Va 22101 | "Brick and Block Laying"
"Brick Laying - Vocational
Training Trade Projects" |
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Bordon Publishing Co.
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Alhambra, Calif. 91801 | School Custodial Service
Charts |
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Sales Section, Publishing Service
New York, N.Y. 10003 | Rural Electrification |
| 51. | Universal Education and Visual Arts
221 Park Avenue South
New York, N.Y. 10003 | "Woodworking-Part I"
"Electrical Basic Wiring" |
| 52. | The Upson Company
43 Upson Point
Lockport, N.Y. 14094 | "Acoustical Insulation
Materials" (booklets) |
| 53. | U.S. Department of Agriculture
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Sheath Cable" |
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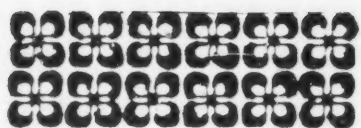
Visual Instruction Productions
295 West Fourth Street
New York, N.Y. 10014

"How to Use Measuring Tools"

"Saw Operations"

"Sharpening the Plane"

"How to Use Hand Boring
Tools"



APPENDIX

- INSTRUCTIONAL MATERIALS CODE
- TASK-RELATED COMPETENCIES CODE

INSTRUCTIONAL MATERIALS CODE

MEDIA CODE/INDEX

Probable Learning Sensations

Code	Media	Vis.	Aud.	Tac.	Kin.	Ole.	Sav.
1	Demonstration with real objects/materials	x	x	x	x	x	x
2	3-D models - Mockups	x	x	x	x	x	x
3	Games - Simulators	x	x	x	x	x	x
4	Sound/Slide Programs	x	x				
5	Filmstrip - Cassette/Record	x	x				
6	TV - Broadcast, Closed Circuit	x	x				
7	Video and/or Audio Recorder	x	x				
8	Film, 16mm - BW/Color, Sound	x	x				
9	Film loop, 8mm	x					
10	Filmstrip	x					
11	Slides	x					
12	Overhead transparencies	x					
13	Books, Magazines, Texts, Booklets	x					
14	Pamphlets, Brochures, Manuals, Workbooks	x					
15	Newspapers, Cartoons	x					
16	2-D Displays, Charts, Graphs, Posters	x					
17	Drawings, Photographs, Schematics, Maps	x					
18	Opaque Projectuals	x					
19	Telephone, Intercom		x				
20	Other, specify						

BIBLIOGRAPHY REFERENCE

... complete ordering information for each of the commercially or teacher-produced instructional materials may be obtained by checking this reference number in the Instructional Materials Bibliography located in the back of the Cluster Guide.

TASK-RELATED COMPETENCIES

The task-related competencies are a summation of the specific skills, understandings, and/or attitudes that are necessary to satisfactorily accomplish the instructional tasks found in the ten cluster guides. The following listing is used for interpreting the Task-Related Competency code numbers found on each task sheet. A more detailed description of each of the identified competencies can be found either in the Program Guide or the Project Handbook.

A. SKILLS BASED ON KNOWLEDGE

1. Name one or more items
2. Request supplies and/or equipment
3. Check for accuracy and, if necessary, require correction of self and/or others
4. Discriminate sound cues, recognize normal sound as opposed to abnormal sound
5. Identify color
6. Identify form, size, shape, texture
7. Sequencing - Respond by pre-determined plan
8. Write identifying information of persons, places, and/or objects, serial no., weight, and/or types of products on slips or tags, etc.
9. Obtain information through sight, shape, size, distance, motion, color, and other unique characteristics
10. Discriminate olfactory cues

B. CONCEPT OF NUMBERS BASED ON KNOWLEDGE

1. Ordinal
2. Cardinal
 - a. read numbers and/or copy
 - b. count and/or record
3. Make change (money)
4. Measure
 - a. distance
 - b. weights - volume - balance
 - c. liquids - solids
 - d. time (measurement of)
 - e. degrees of circle
 - f. temperature, pressure and humidity
 - g. torque
 - h. electricity
 - i. vertical-horizontal
5. Perform simple addition and/or subtraction
6. Perform simple multiplication and/or division

TASK-RELATED COMPETENCIES, continued. . .

C. COMPREHENSION AND PERFORMANCE

1. Forms
 - a. write
 - b. file, post and/or mail
2. Match
 - a. duplicate
 - b. sort
3. Check lists and/or fill out report forms
4. Time awareness
5. Follow verbal symbol and/or written direction
6. Recognize words (not numbers) or ability to read and/or write
7. Depth perception
8. Ability to select most appropriate solution
9. Concept of distance

D. SKILLS BASED ON PHYSICAL ABILITIES

1. Fine Coordination
 - a. coordinate eyes and hands or fingers accurately
 - b. make precise movement
 - c. move fingers to manipulate objects
 - d. move hands skillfully - placing and turning motion
 - e. coordinate hand and foot
 - f. feeling - perceiving objects and materials as to size, shape, temperature, moisture content, or texture by means of touch
2. Strength (lifting, carrying, pushing, and/or pulling)
 - a. sedentary work, 10# occasionally lifting and/or carrying small items such as tools, etc.
 - b. light work, 20#, requires a significant amount of standing or walking
 - c. medium work, lifting 50#, frequent lifting and carrying objects weighing 25#
 - d. heavy work, frequent lifting and/or carrying up to 50#
 - e. very heavy work - lifting objects in excess 100#, lifting and/or carrying objects weighing 50# or more
3. Gross Coordination (climbing and/or balancing)
 - a. maintain body equilibrium to prevent falling when walking, standing, crouching, or running on narrow, slippery or moving surfaces
 - b. ascend and descend ladders, stairs, scaffolding, ramps, poles, ropes, using feet and legs and/or hands and arms
 - c. reaching - extending hands and arms in any directions
 - d. crawling - moving on knees or hands and feet
 - e. kneeling - bend legs at knees to rest on knee or knees
 - f. stooping - bend downward and forward by bending legs and spine
 - g. bending - downward and forward by bending at the waist